

ARCHITECTURAL DETAILS

FOR EVERY TYPE OF BUILDING

FOR
CONTRACTORS
BUILDERS
LUMBER DEALERS
MILL MEN
DRAFTSMEN
ARCHITECTS

WM. A. RADFORD
CHICAGO, ILL.

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my native Land*

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ARCHITECTURAL DETAILS

FOR EVERY TYPE OF BUILDING

A Practical Drafting Room Guide
for Contractors, Builders, Lumber
Dealers, Millmen, Draftsmen, and
Architects.

By

William A. Radford, President of the Radford Architectural Co.; Editor-in-Chief "American Builder" and "Farm Mechanics"; Publisher "Radford's Cyclopedia of Construction" in twelve volumes; "Radford's Estimating & Contracting"; "Details of Building Construction"; "Guaranteed Build-Plans", Etc., Etc. . . .

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FOREWORD

THIS present volume is intended to supplement our well-known collection of building details, entitled "Radford's Portfolio of Details of Building Construction," which was first issued in 1912 and has since run thru many editions.

All of the plates in the present series are new—not duplicating at all the earlier work. They present many of the modern ideas, that have come to the front during the past ten years.

This collection of details is offered with the expectation and hope that it will be of great practical utility to carpenters, builders, mill men, lumber dealers, draftsmen and architects. The aim has been to make it a complete manual of modern building practice, all points being made clear and understandable by means of the working drawing—the language of the blue print and the universal language of the building trades.

This book is a collection of plates, accurately drawn by skilled draftsmen, showing clearly the details of modern building construction and finish. Brief explanatory text accompanies each plate, calling attention to some of the points illustrated. The drawings themselves, however, are of first importance and should be carefully studied. More helpful ideas and exact information are contained in a single one of these plates of details than could be crowded into a whole chapter of ordinary descriptive text.

Details are given showing the framing and construction of residences of every type—frame houses, brick houses, brick veneer houses, stucco houses, etc. Also every popular and attractive style of interior trim is fully detailed. Special ideas are presented for the appropriate interior finish for every room or part of the house. These ideas are worked out complete, the drawings showing both the arrangement of the room and all the interior trim, including built-in features, fully detailed.

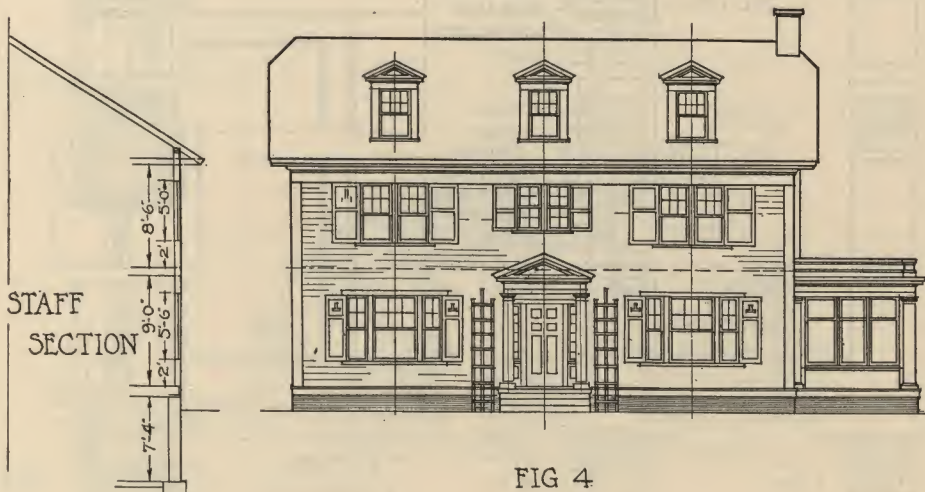
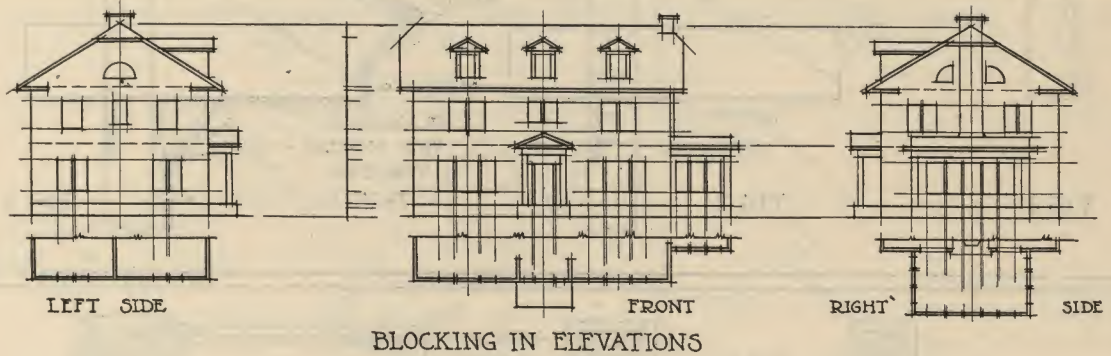
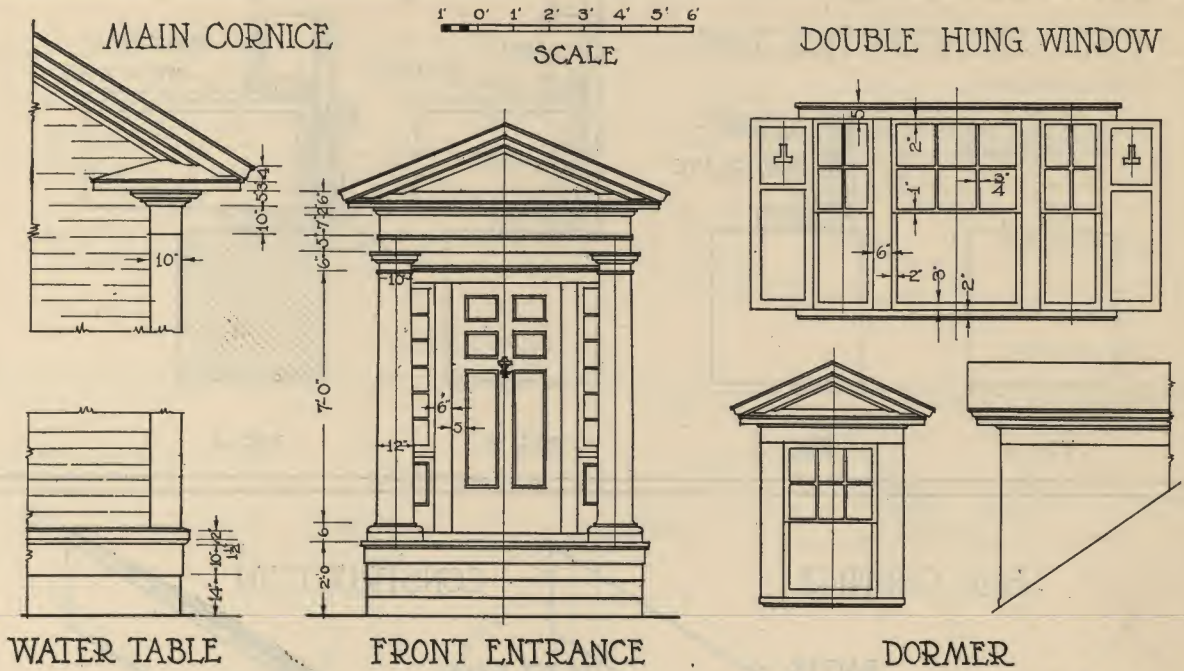
This is the day of "built-in" space and labor-saving features in the home. Carpenters and builders are called on continually to plan and build buffets and sideboards for the dining room; kitchen cabinets, cases, and cupboards for the kitchen and pantry; wardrobes and linen closets for the chambers; and window seats, fireplaces with decorative mantels, and built-in bookcases for the living room and library. These drawings have been prepared to show exactly how this kind of work is done. Many practical ideas are embodied in them; and new and attractive designs are presented from which the carpenter, the architect, or the builder can draw for all or any of these.

Many valuable details are also included in this collection of special interest to the country carpenter and builder. These include barn framing details of all kinds, ice-house and cold storage construction, silo building, etc.

The practical utility of detail plates of this kind will probably be best appreciated by those who draw plans or who are called upon to make their own designs for building work. The drawings in this collection have been prepared to meet especially the needs of such workmen.

Especial attention is called to the Index. This has been made very complete, all the various features detailed on any of the plates being listed and cross-indexed so that they may be very quickly found, without the necessity of searching thru the entire work. Since all the plates are completely indexed for ready reference their full value is available for use by the busy man.

TYPICAL ELEVATION DETAILS



DEVELOP
MENT
OF
FRONT
ELEVATION

FIG 4

DEVELOPMENT OF DETAILS

BOX SILL CONSTRUCTION

SCALE
12' 6' 2' 0"



FIG. 1

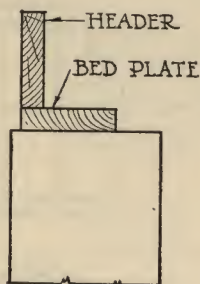


FIG. 2

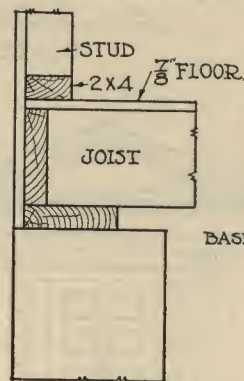


FIG. 3

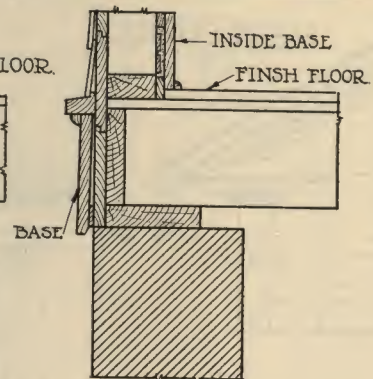


FIG. 4

BOX CORNICE

CONSTRUCTION



FIG. 1

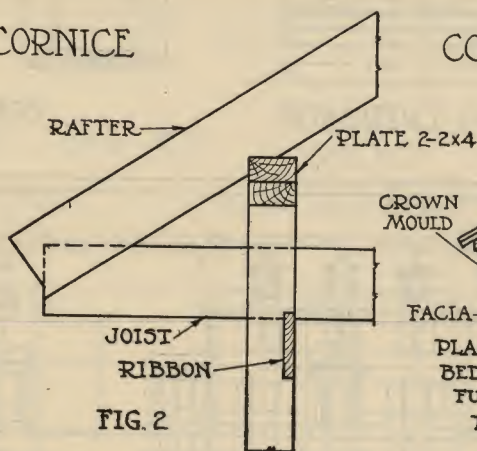


FIG. 2

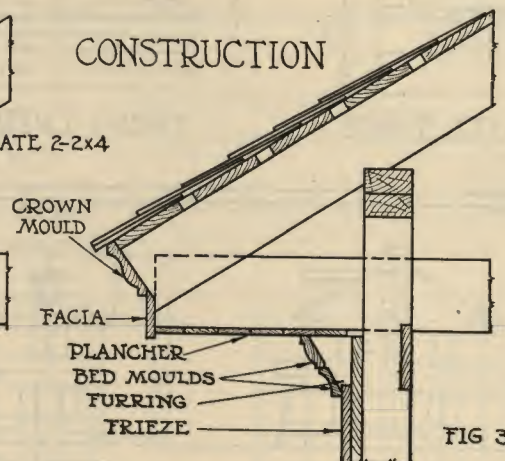


FIG. 3

DOUBLE
HUNG
WINDOW
CON
STRUC
TION

SCALE
6' 3' 10"



FIG. 1

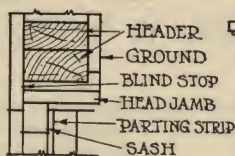
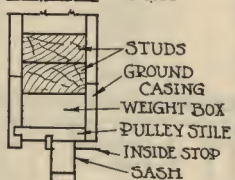
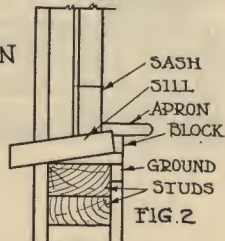
HEAD
SECTIONJAMB
SECTIONSILL
SECTION

FIG. 2

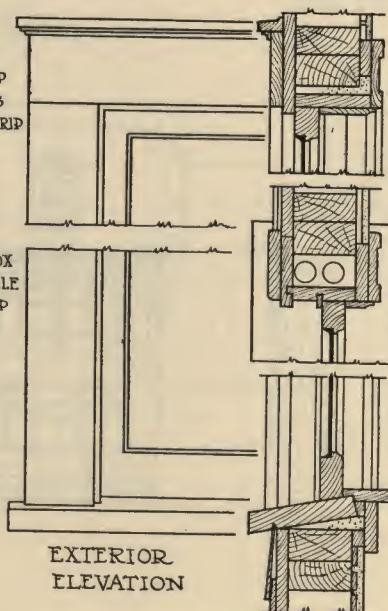
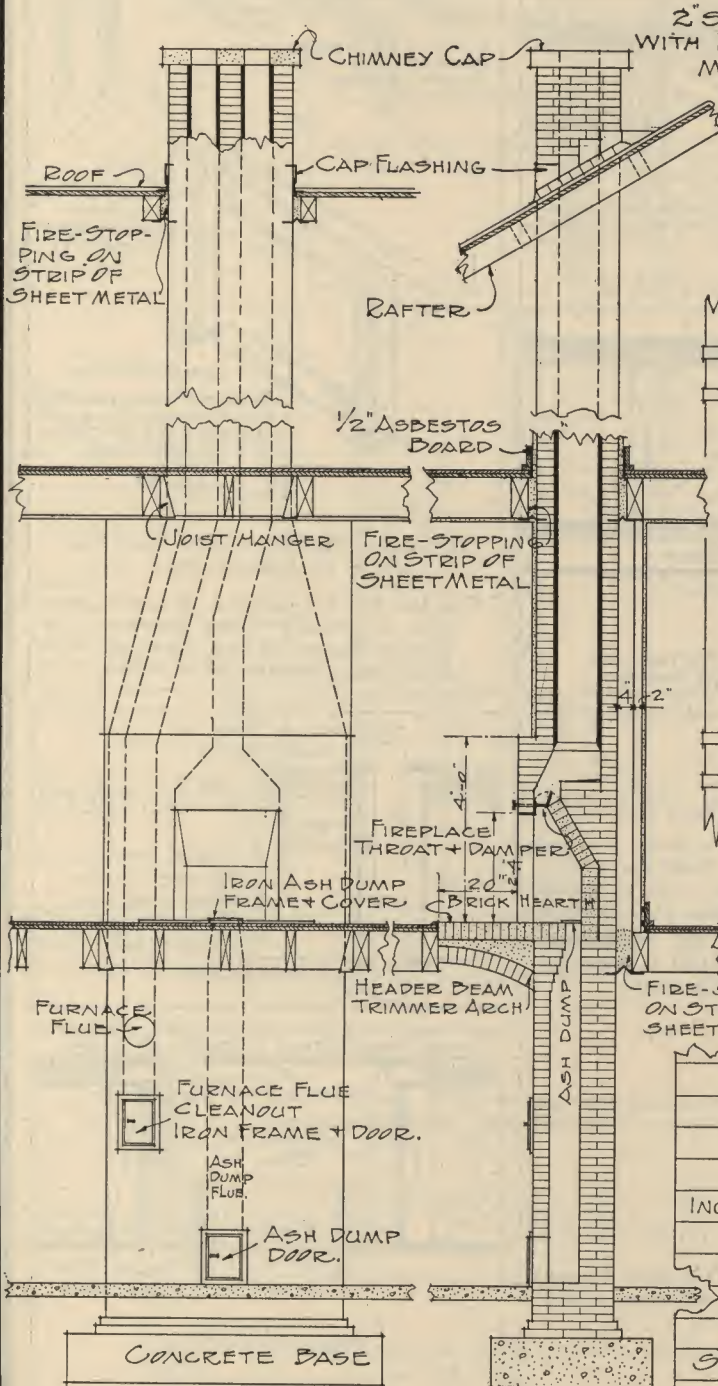
EXTERIOR
ELEVATION

FIG. 3

DETAILS OF FIRE-RETARDING CONSTRUCTION



ELEVATION
SECTION
STANDARD CHIMNEY CONSTRUCTION

ELEVATION AND SECTION OF AN INTERIOR INDEPENDENT CHIMNEY SHOWING RECOMMENDED CONSTRUCTION.

2" SPACE FILLED WITH INCOMB'LE MATERIAL

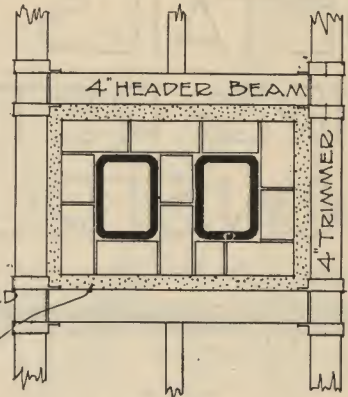


FIG. NO. 1

FIG#1 SHOWING ORDINARY FLOOR FRAMING AROUND A CHIMNEY ALL TIMBERS 2" CLEAR OF BRICKWORK AND SPACE FILLED WITH FIRE-PROOFING MATERIAL

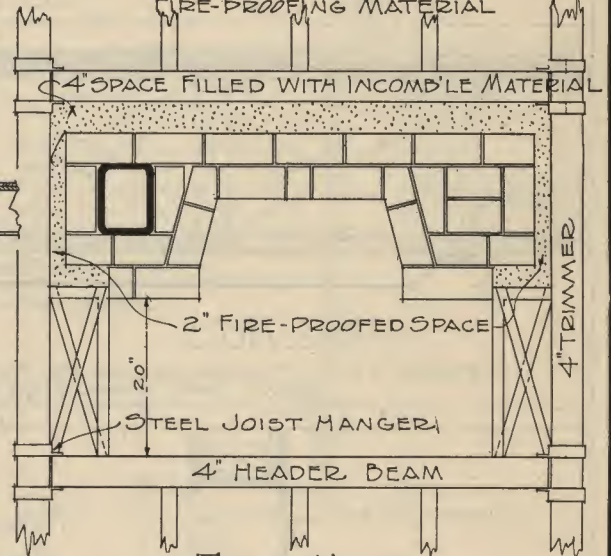


FIG. NO. 2

FLOOR FRAMING AROUND A SINGLE FIREPLACE. NOTE FILLING BETWEEN FRAMING AND BRICKWORK, WHICH SERVES BOTH AS INSULATOR AND FIRE-STOP

FIRE-STOPPING ON STRIP OF SHEET METAL

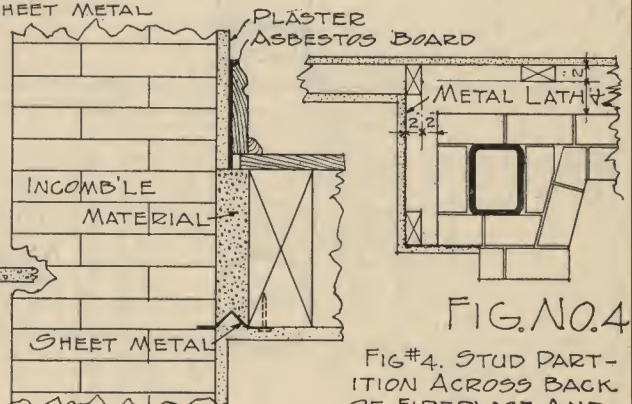


FIG. NO. 4

FIG#4. STUD PARTITION ACROSS BACK OF FIREPLACE AND AROUND THE ENDS OF CHIMNEY BREAST, SHOWING PROPER METHOD OF ARRANGING STUDS.

FIG. NO. 3

FIG#3. SHOWING SUPPORT OR FIRE-STOPPING AROUND CHIMNEY AND PROTECTING WOODWORK.

DETAILS OF FIRE-RETARDING CONSTRUCTION

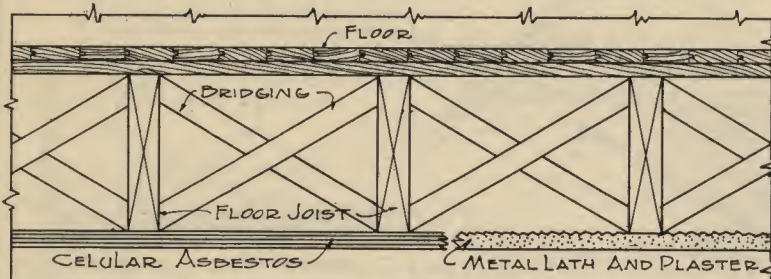


FIG. NO. 1

FIG. NO. 2

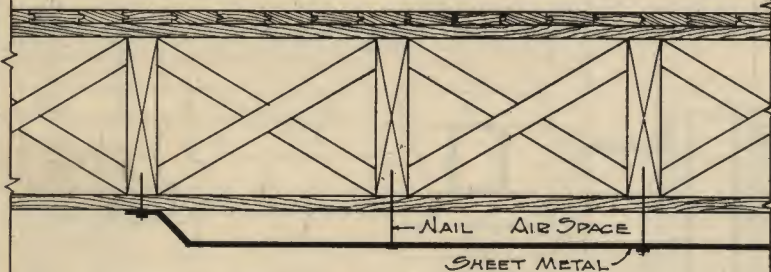


FIG. NO. 3

FIG. NO. 1-2+3 SHOWING METHODS OF PROTECTING CEILING OVER FURNACE OR BOILER

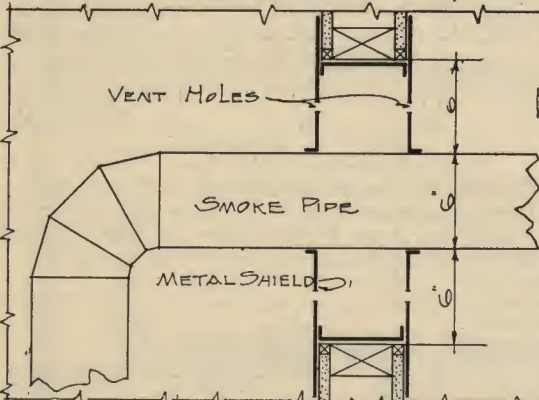


FIG. NO. 4.

FIG. NO. 4. SHOWING SECTION VIEW OF PROTECTION AROUND A SMOKE PIPE PASSING THRU A WOODEN PARTITION.

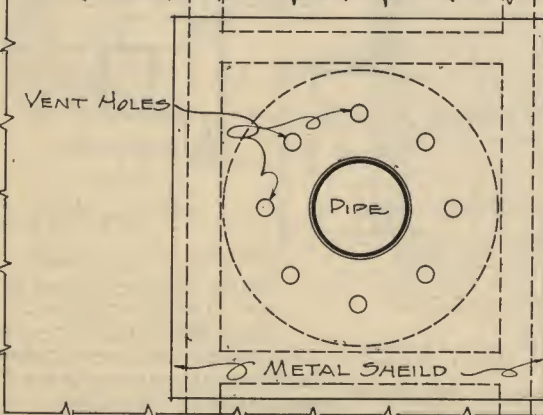


FIG. NO. 5.

FIG. NO. 5 SHOWING ELEVATION OF FIG. NO. 4.

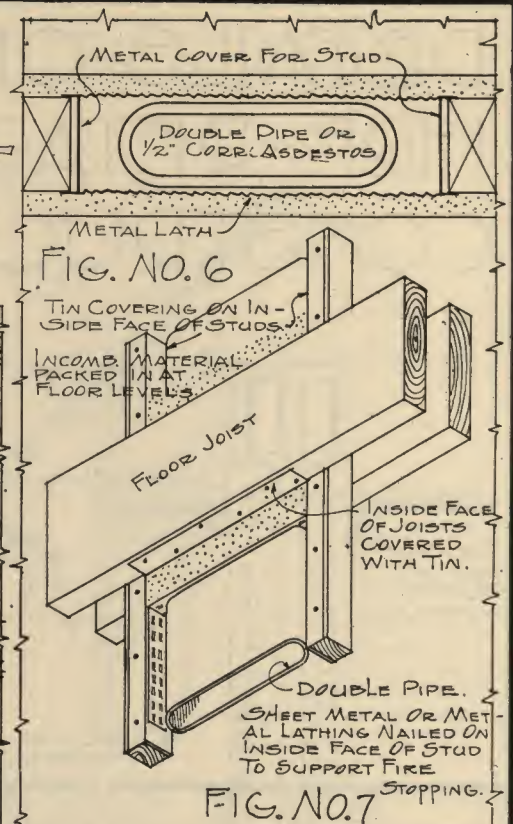


FIG. NO. 6. - PROTECTION OF HOT AIR PIPE IN WOODEN STUD PARTITION.

FIG. NO. 7. ISOMETRIC SKETCH SHOWING METHOD OF FIRE STOPPING BETWEEN FLOOR JOISTS AROUND HOT AIR PIPE, CARRIED UP IN A PARTITION

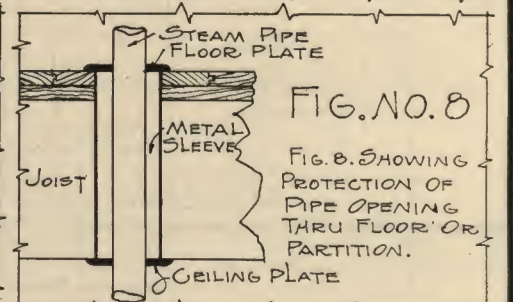


FIG. NO. 8

FIG. NO. 8. SHOWING PROTECTION OF PIPE OPENING THRU FLOOR OR PARTITION.

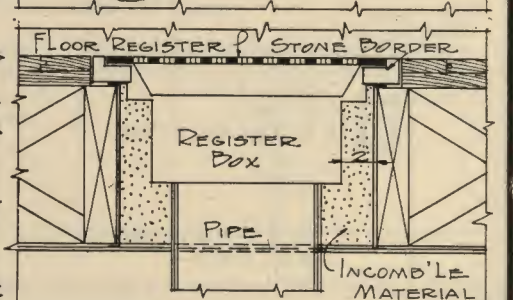


FIG. NO. 9

FIG. NO. 9 SHOWING A COMPLETE METHOD OF FIRE STOPPING, FLOOR REGISTER, WELL SUITED FOR EXISTING BUILDINGS.

DETAILS OF FIRE RETARD ING CONST- RUCTION

FIG. 1

CONNECTION OF FLOOR JOISTS WITH OUTSIDE "BALLOON" FRAME AT PLATE LEVEL, SHOWING BOX CORNICE, GUTTER TROUGH, AND FOOT OF RAFTERS, AND METHOD OF FIRE-STOPPING.

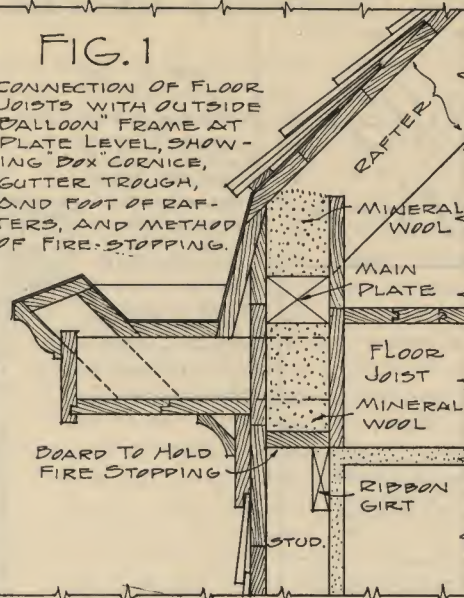


FIG. 5

CONNECTION OF FLOOR JOISTS WITH OUTSIDE "BALLOON" FRAME, METHOD OF FIRE-STOPPING CORNICE AND "GAMBREL" ROOF CONSTRUCTION.

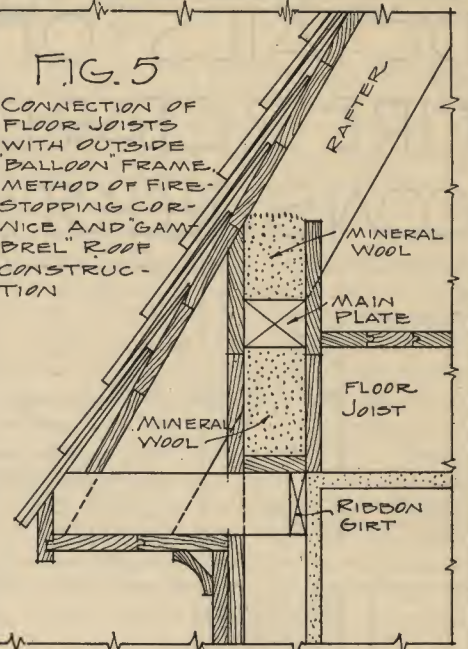


FIG. 2

SECTION THRU HEAD OF SLIDING DOOR POCKET IN A STUD PARTITION, SHOWING METHOD OF FIRE STOPPING.

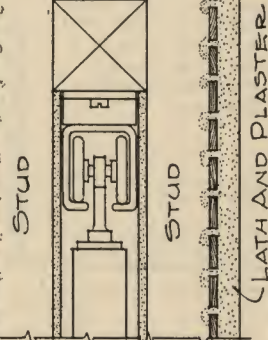


FIG. 6

SECTION THRU FLUSH FRAME WITH PORCH CEILING JOISTS FINISHING AGAINST IT, AND METHOD OF FIRE-STOPPING.

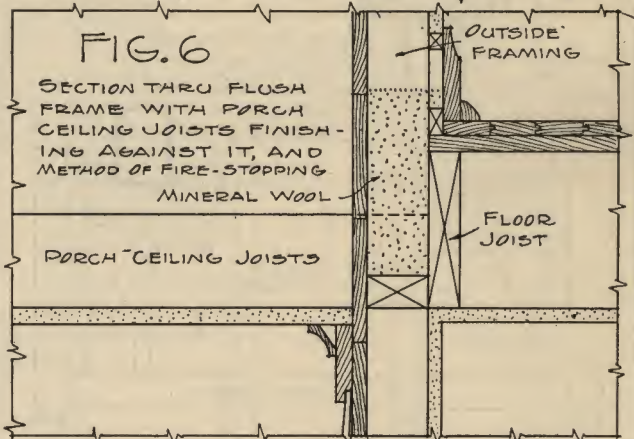


FIG. 3

SECTION THRU DOOR POCKET AT FLOOR.

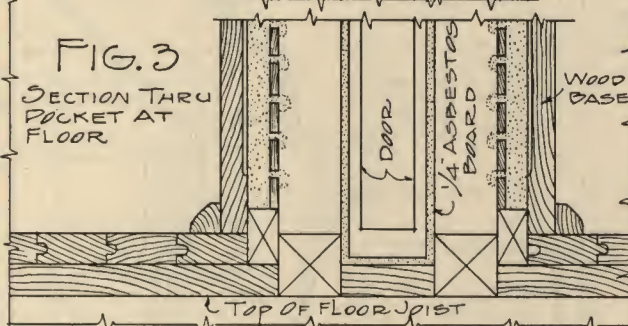


FIG. 7

SECTION THRU AN OUTSIDE FRAME OVERHANGING AT SECOND FLOOR LEVEL, WITH CEILING JOISTS AND RAFTERS OF A PIAZZA FRAMED IN TO IT METHOD OF FIRE STOPPING OVER CEILING JOIST, ALSO FOR OUTSIDE OF FRAME WALL UNDER PORCH ROOF.

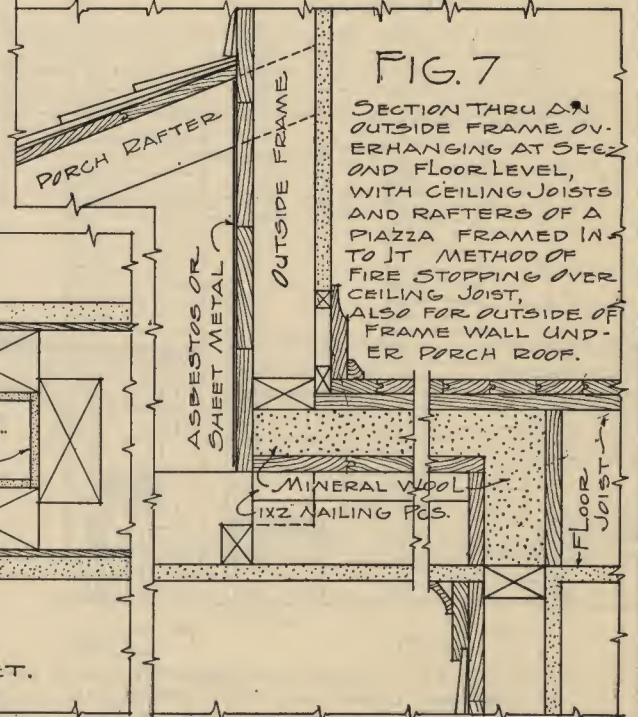
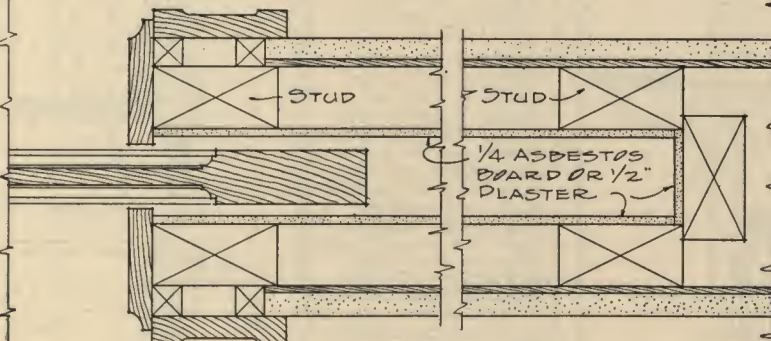
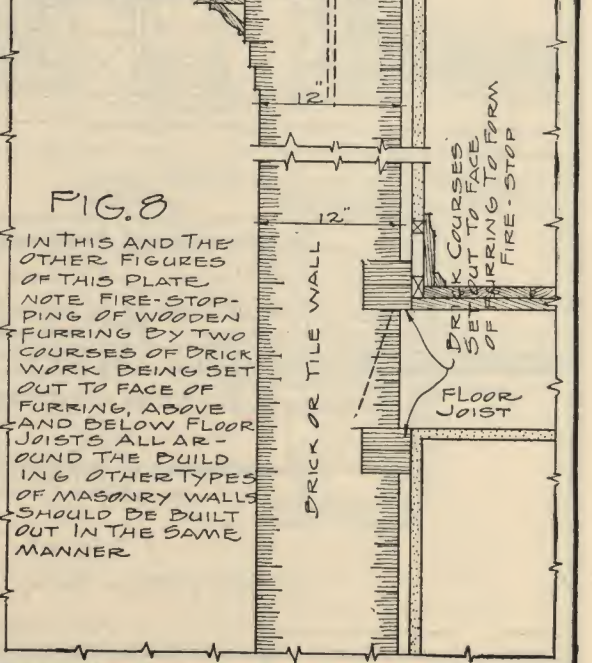
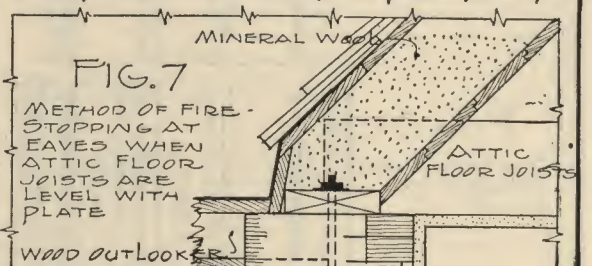
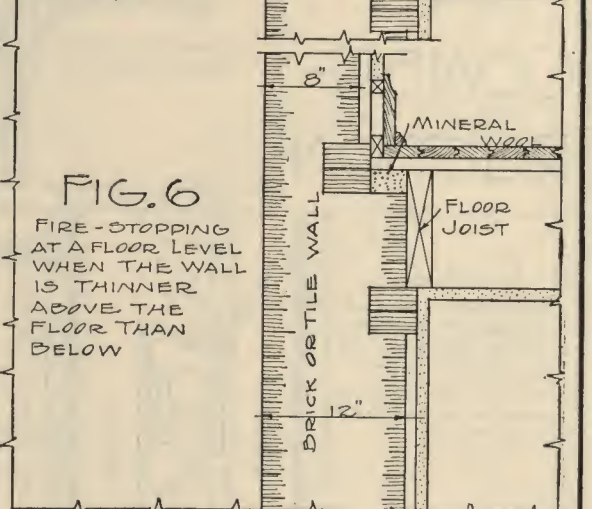
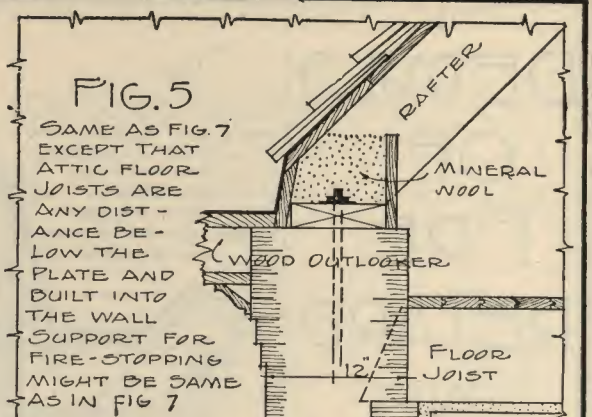
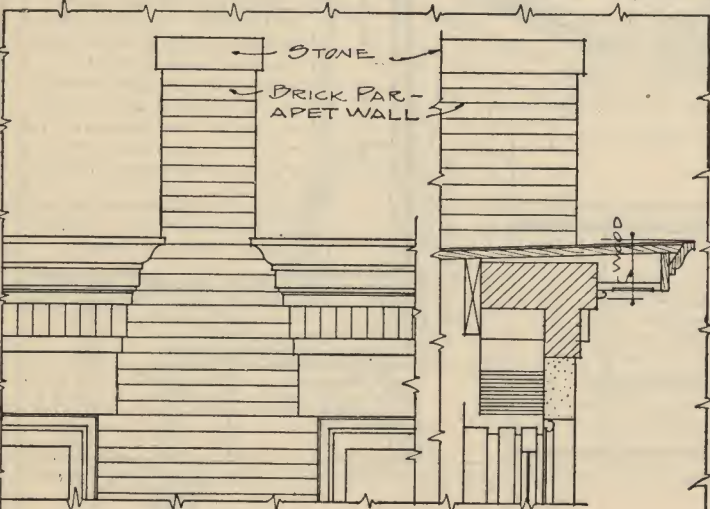
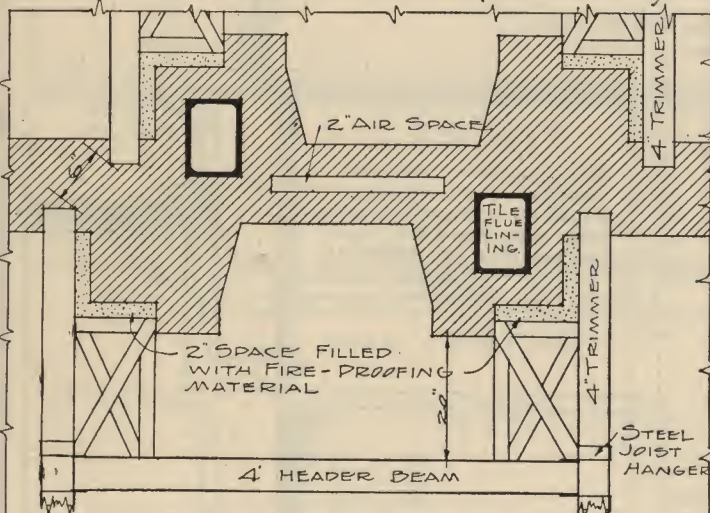
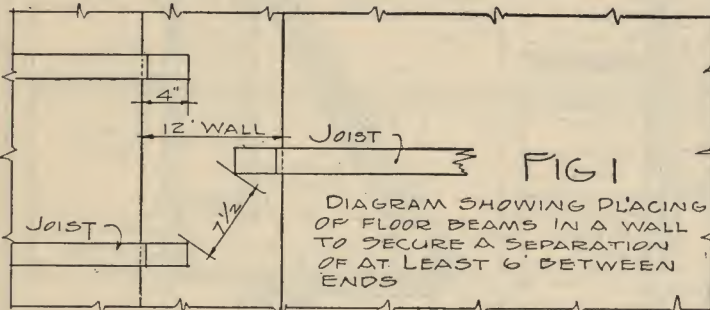


FIG. 4

SECTION PLAN THRU DOCKET.



DETAILS OF FIRE RETARDING CONSTRUCTION

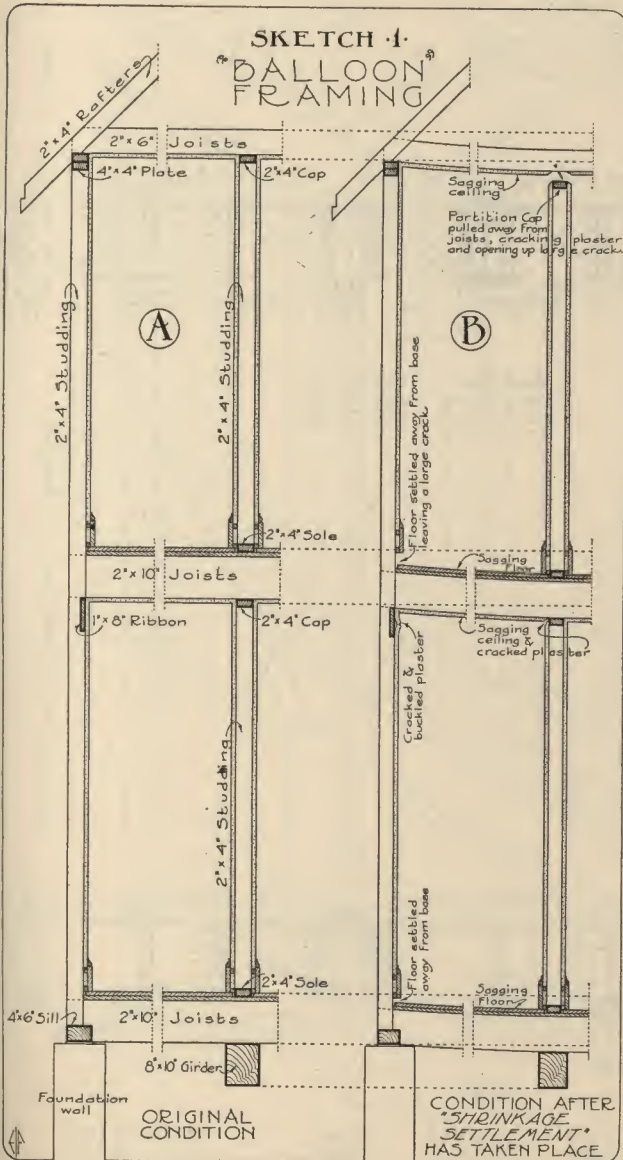


Framing to Prevent Unequal Shrinkage-Settlement

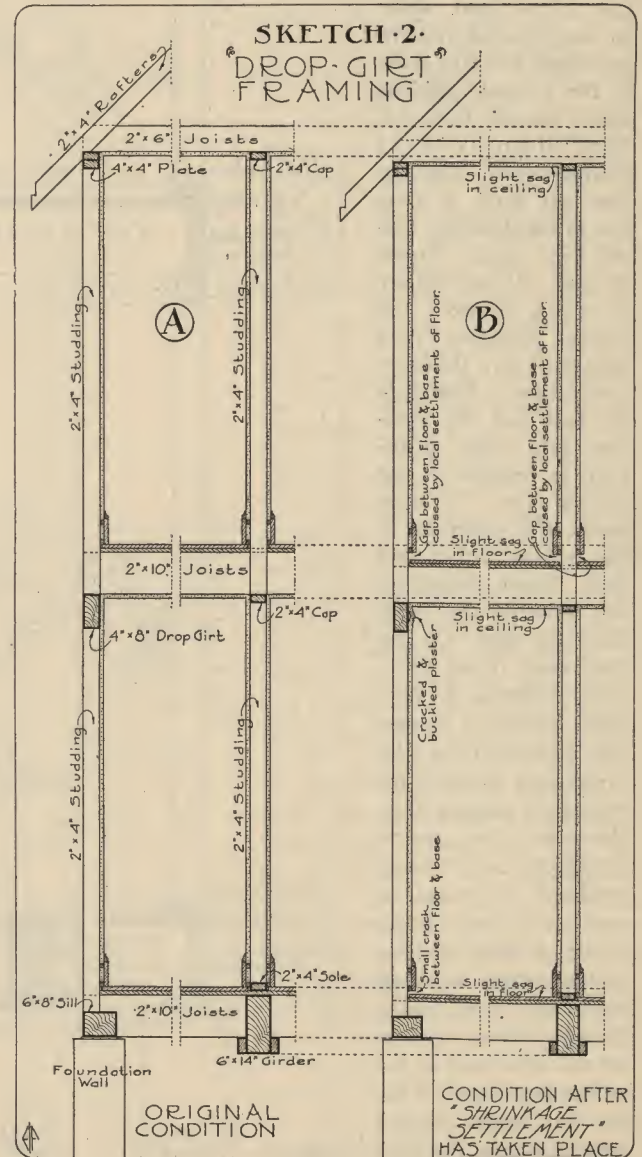
SKETCH No. 1 shows a cross-section of a "balloon" frame taken from an actual example. It is a glaring violation of all the principles of good construction, fire-resistance and sanitation. It's a fire trap, a vermin harbor, and is subject to a disastrous amount of *unequal settlement*. At "A" is shown the original condition of the framework just after being built. At "B" is indicated, graphically, the dilapidated and deplorable condition of affairs, a year later, after the inevitable shrinkage-settlement has taken place. And it is to be especially noted that the faults shown are not the result of settlement itself, but rather the result of the *difference* in settlement of corresponding and adjacent parts. If an engineer were to design a foundation in such a manner as to be productive of the faults shown, he would, most assuredly, be considered an exceedingly poor engineer. And rightly so. Why, then, in the name of common justice, is not the builder who, day after day, continues to design and frame the timber superstructure in the manner shown, deserving of the same amount of condemnation as the discreditable engineer? Wherein is the difference between an incompetent designer of foundations and an incompetent

designer of timber framing? As a matter of fact, the latter, in this particular case, is more to be censured than the former, for, in residence construction, seven cases out of ten the evils resulting from unequal settlement can be traced to the timber framework rather than to the foundation.

In the "balloon" framing, shown in Sketch No. 1, the exterior studding extends in one length from sill to rafter plate. Hence, the amount of shrinkable timber contributing to the total vertical settlement of the exterior wall is made up of the 4-inch sill and the 4-inch rafter-plate, equaling 8 inches in all. In like manner, the shrinkable bearing-timber in the interior partition is made up of the 10-inch girder, the two sets of 10-inch floor-joists, the two layers of 1-inch sub-flooring, the two 2-inch partition-soles, and the two 2-inch partitioning caps, totaling 40 inches. Hence, assuming an ultimate shrinkage of $\frac{1}{2}$ inch to the foot, the exterior wall will settle $\frac{1}{24}$ th of 8 inches, or only $\frac{1}{3}$ inch, while the interior partition will settle $\frac{1}{24}$ th of 40 inches, or $1\frac{2}{3}$ inches. And the *difference* of $1\frac{2}{3}$ inches is bound to cause trouble—floors sag, door frames are thrown out of square, plastering cracks, and the upper partition sometimes

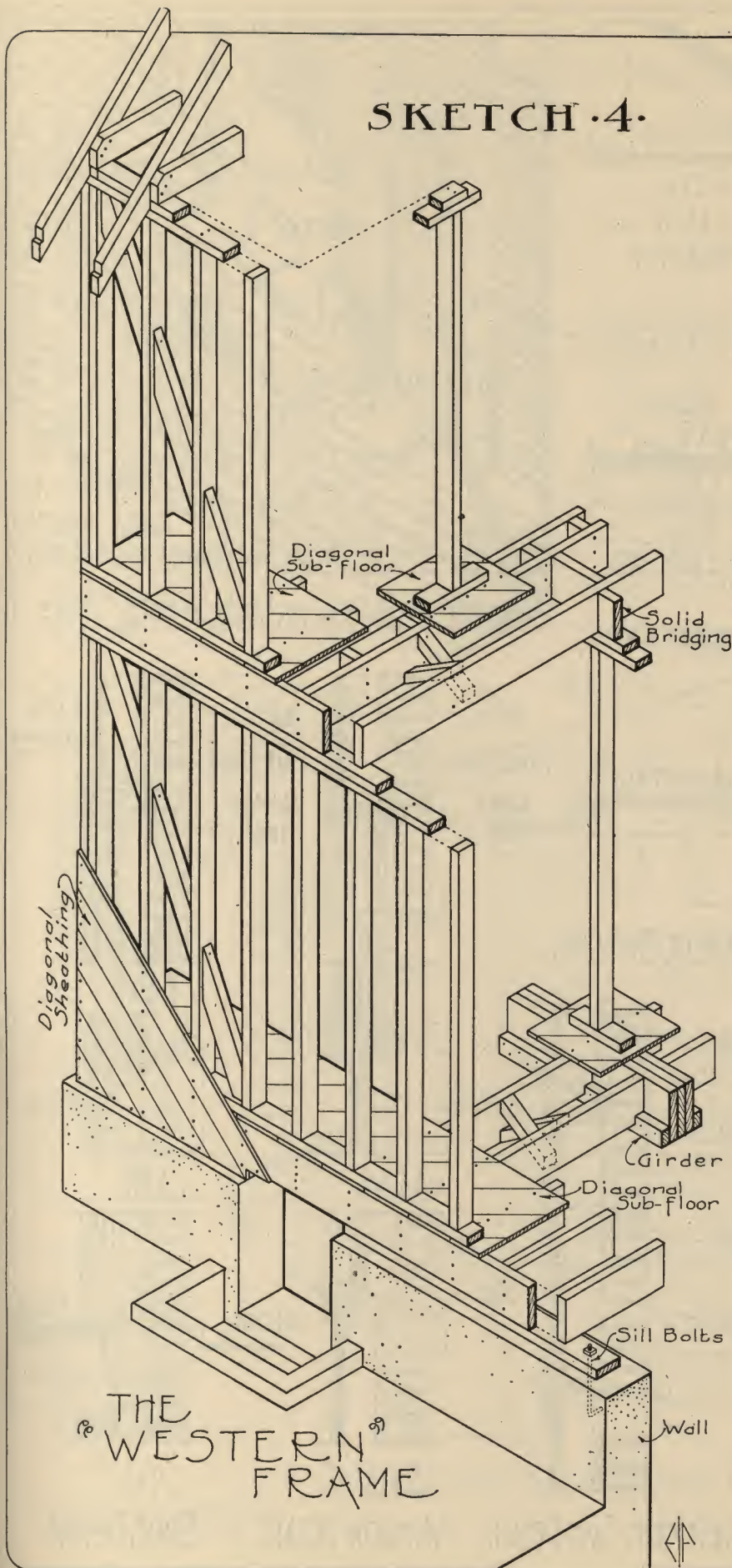


Showing Settlement Which Is Customary with Balloon Framing.



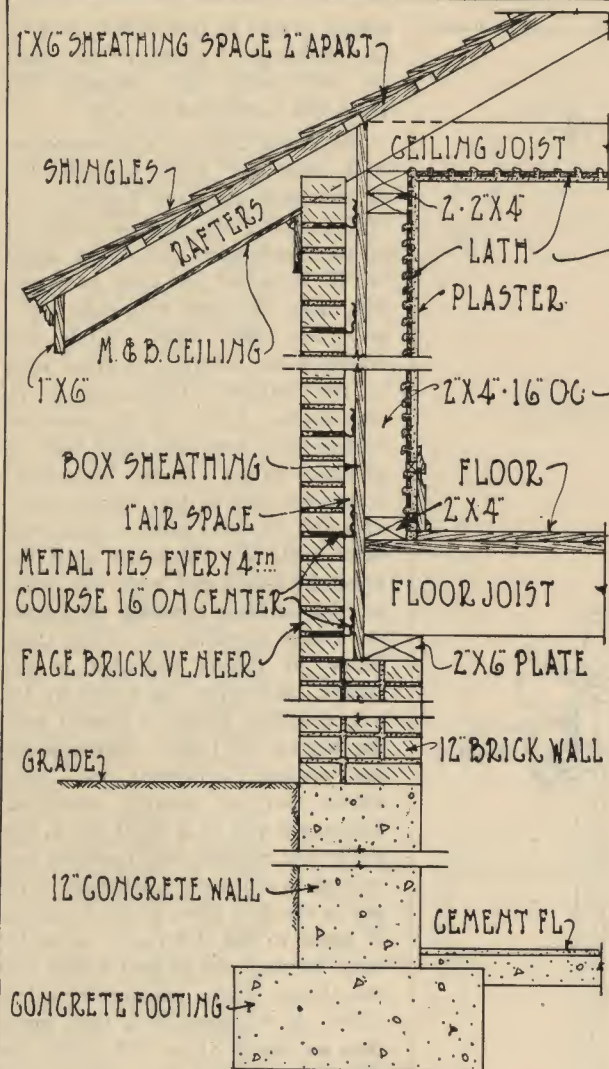
Showing Shrinkage Settlement with Drop-Girt Framing.

SKETCH · 4 ·

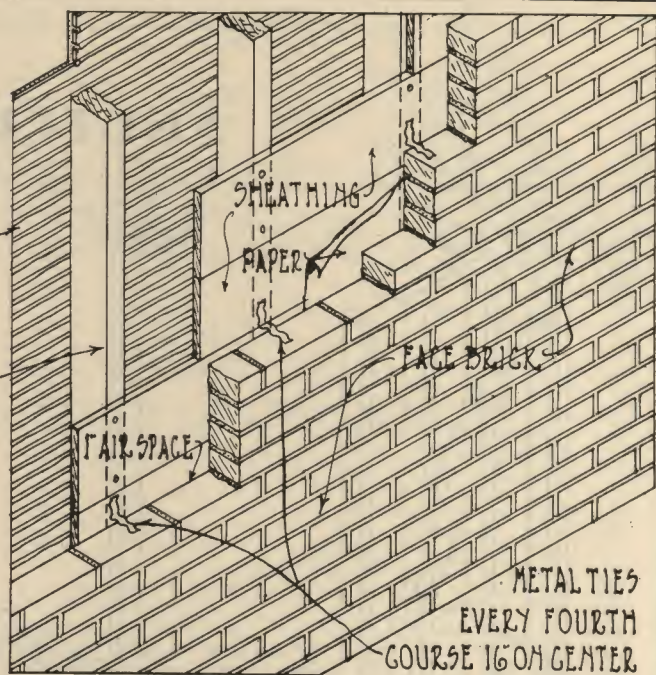


plaster cracks in this vicinity and, if this shrinkage is excessive, the plaster will buckle and, perhaps, fall from this portion of the wall.

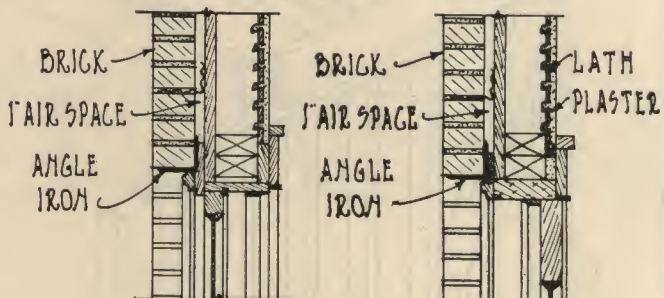
Sketch No. 2 shows a cross-section of a "drop-girt" frame as called for by the most approved practice. At "A" is shown the original condition of the frame upon completion, while at "B" is shown the same construction after the usual shrinkage-settlement has taken place. While this frame is far superior, in every way, to the "balloon" frame, yet it is, nevertheless, subject to the same resultant evils, even tho these evils be of lesser extent. In the "drop-girt" frame, the second-story exterior studding and the outer ends of the second floor joists are supported upon the 4-inch by 8-inch girt, while the upper interior partition studding rests upon the 2-inch partition cap of the story below, as clearly indicated in the sketch. Moreover, the 6-inch by 14-inch first-floor girder is framed with the top of the joists. Consequently the *general* settlement has been almost, but not entirely, equalized. There will still be a slight sag in the floors and ceilings, but probably not enough to crack the plastering. The sag in the first floor, in this instance, is equal to the difference in settlement between the 14-inch girder and the 10-inch joists, amounting to but $\frac{1}{24}$ th of 4 inches, or a little more than an eighth of an inch, while the sag in the second floor will be not quite one-quarter of an inch, and the sag in the second-story ceiling will equal the difference in the total general settlement of the exterior and interior walls, amounting to exactly an eighth of an inch. But, as before said, this slight sagging will probably cause no serious damage. However, the *local* settlement occurring at the outer ends of the first floor joists, and at *both* ends of the second floor joists, cannot be so easily overlooked. At all of these points, as shown in the sketch, the vertical studding extends into the "zone" of the floor-construction. Hence, the floor settles *in relation to the studding* and therefore opens up a gap between the floor and base, being more pronounced at the second floor-level because of the greater depth of shrinkable material existing there between the top of the sub-floor and the bearing-surface of the joists. A gap of $\frac{1}{2}$ inch or more is not an uncommon occurrence. An attempt to remedy this fault is sometimes made by placing a base-shoe at the junction of base and floor, and nailing same to the floor only, thus keeping the gap "covered."



WALL SECTION OF BRICK VENEER BUILDING

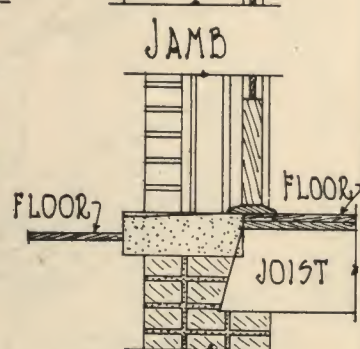
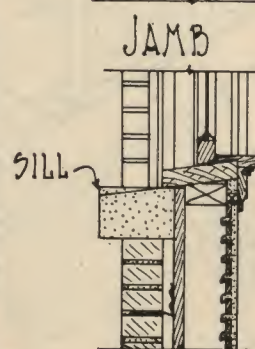
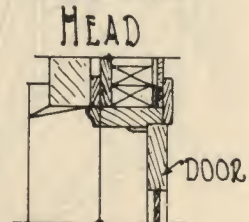
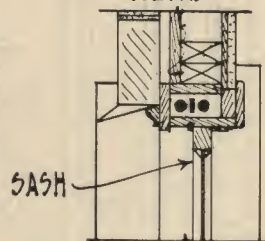


ISOMETRIC VIEW SHOWING BRICK VENEER CONST.



HEAD

HEAD

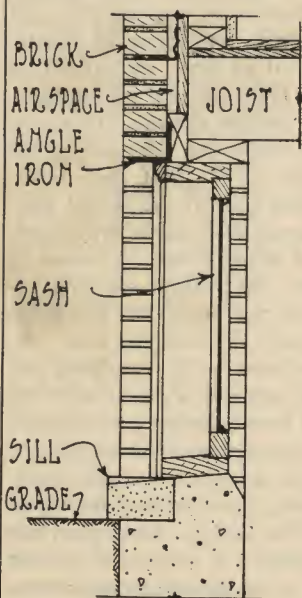


SILL

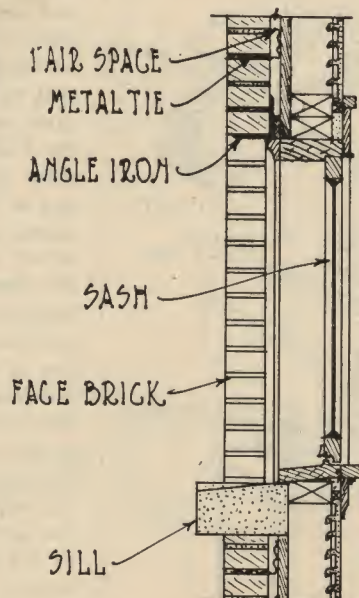
SILL

WINDOW DETAIL

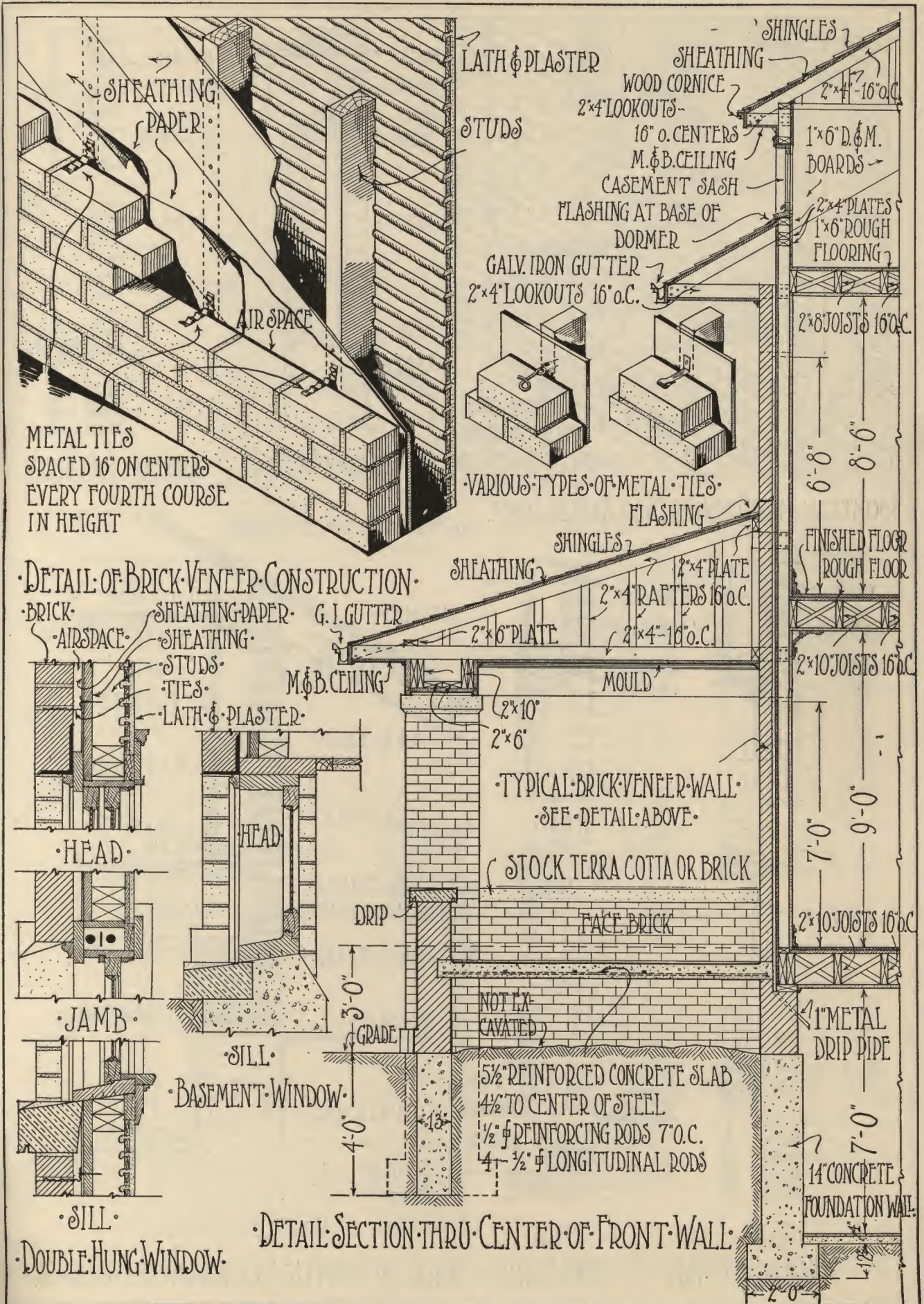
DOOR DETAIL



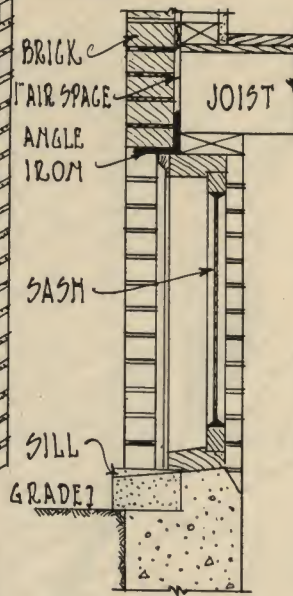
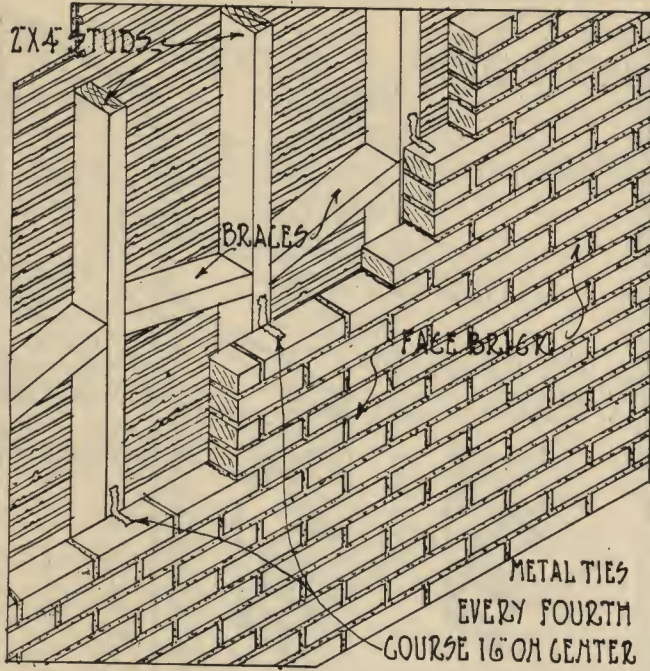
CELLAR SASH DETAIL



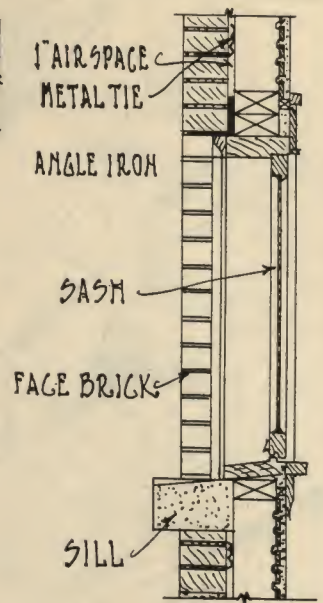
CASEMENT SASH DETAIL



Details of Brick Veneer Construction—Four-Inch Face Brick Bonded to Wood Sheathing at Every Joist by Means of Metal Ties in Each Fourth Mortar Joint.



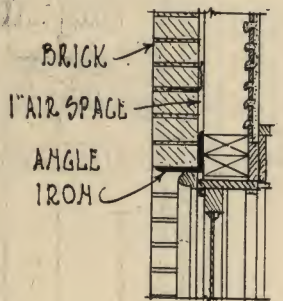
CELLAR SASH DETAIL



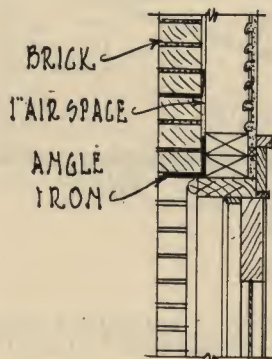
CASEMENT SASH DETAIL

ISOMETRIC VIEW SHOWING BRICK VENEER CONST.

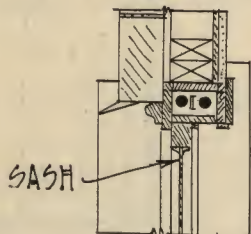
1x6 SHEATHING SPACE 2" APART



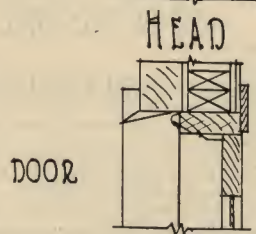
HEAD



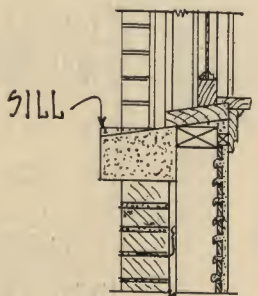
HEAD



JAMB

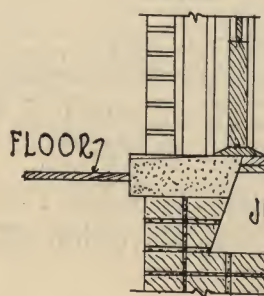


JAMB



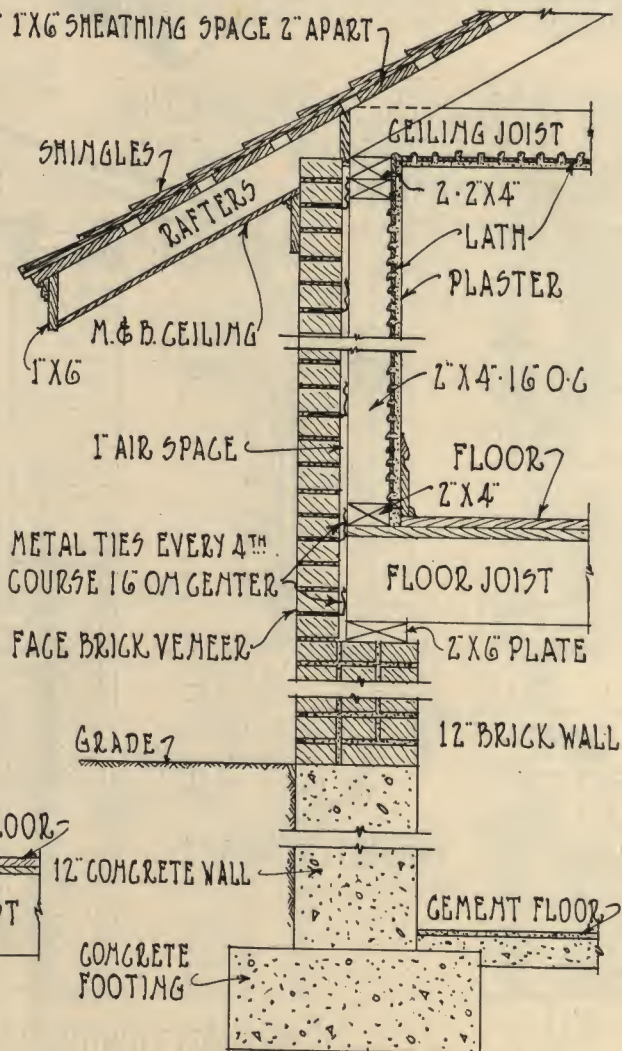
SILL

WINDOW DETAIL



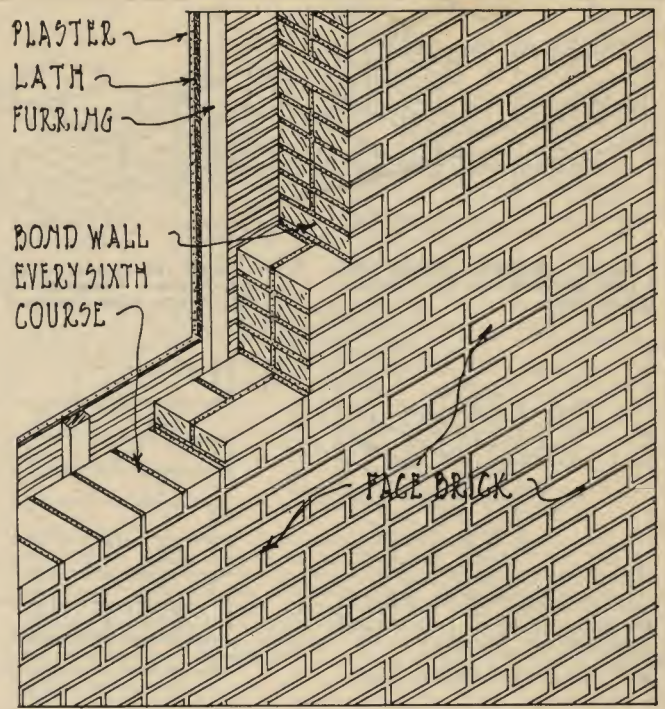
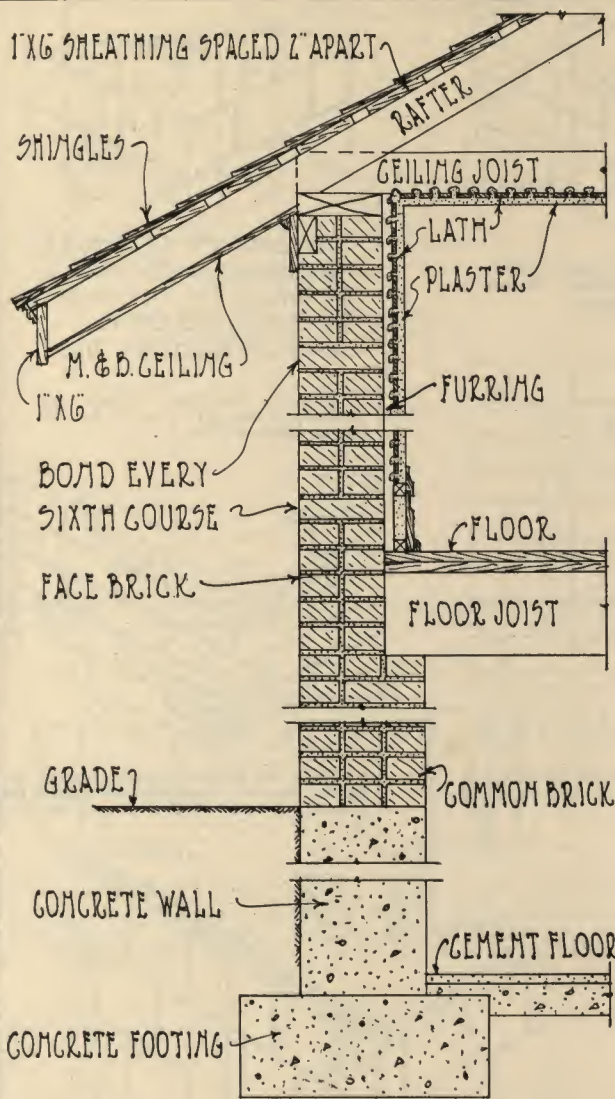
SILL

DOOR DETAIL

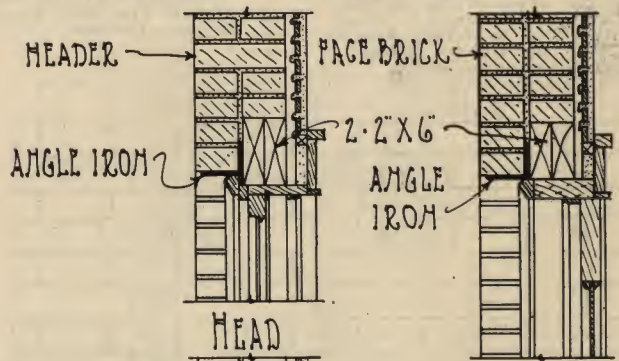


WALL SECTION OF BRICK VENEER BUILDING.

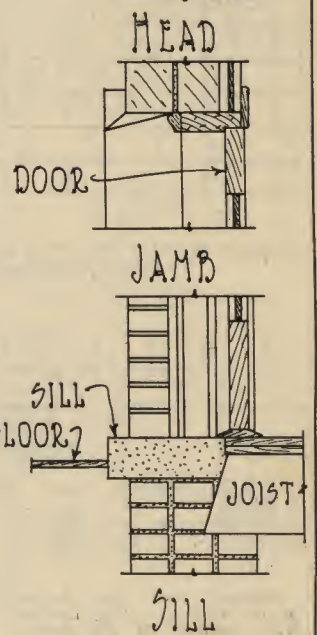
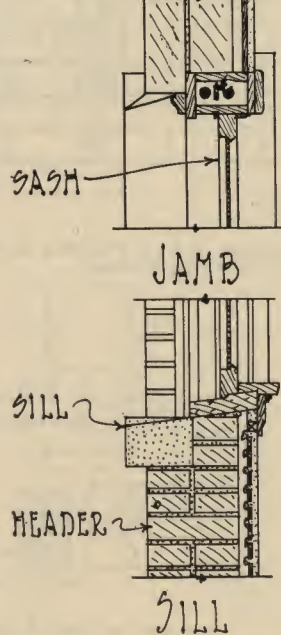
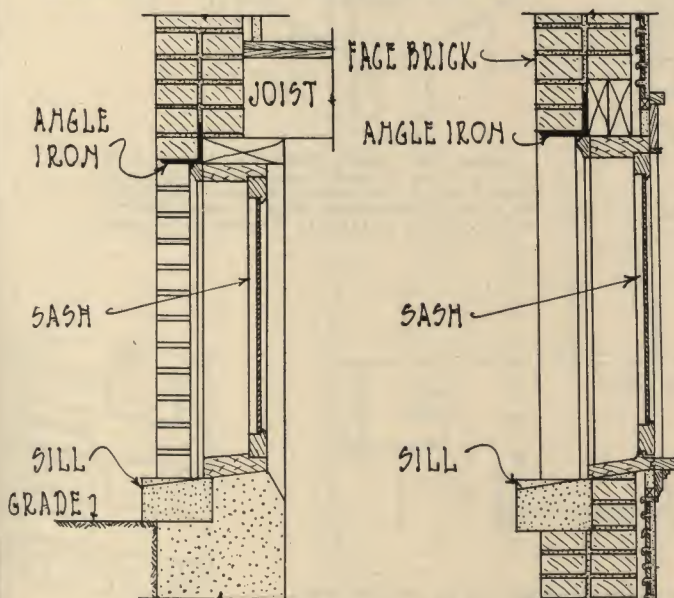
Details of Wall Construction, Including Window and Door Details of Face Brick Veneer Over Braced Wood Frame Without Sheathing.
The Least Expensive Face Brick Construction for Residences and Other Small Buildings.



ISOMETRIC VIEW OF SOLID BRICK WALL



WALL SECTION OF BRICK BUILDING

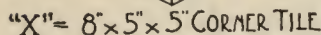


CELLAR SASH DETAIL

CASEMENT SASH DETAIL

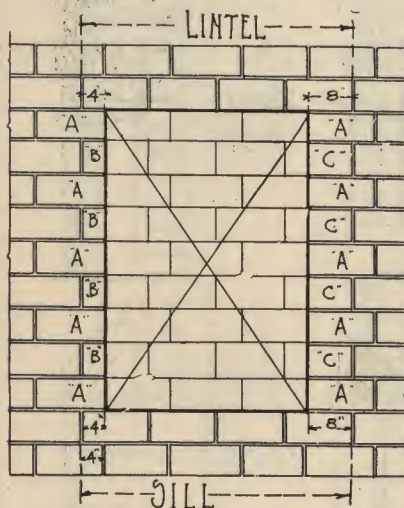
WINDOW DETAIL

DOOR DETAIL

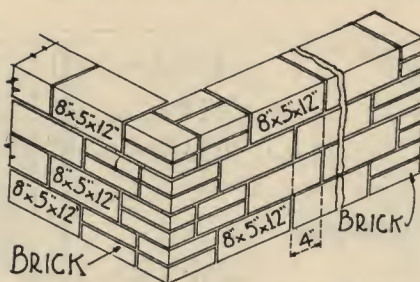


A diagram of a brick wall corner. The wall is constructed from bricks laid in a standard pattern. A gap is shown in the corner, with a dimension line indicating a width of 3 inches. Another dimension line indicates a depth of 3 inches for the corner structure.

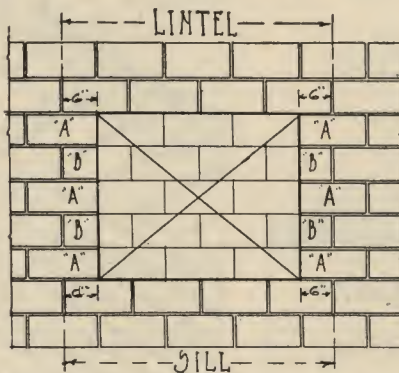
Corner Bonding Detail for 5-Inch Walls of 4 by 5 by 12-Inch Hollow Tile Laid on the 5-Inch Bed. When Laid on the 4-Inch Face for 4-Inch Walls, the Corner Tile Would Be of 4 by 8-Inch Sections Cut to 4-Inch Length (4 by 8 by 4-Inch), Giving a 4-Inch Breaking of Joint.



**Diagram Showing Placing of Opening in Hollow Tile Wall Having
a 4-Inch Running Bond Between Courses.**

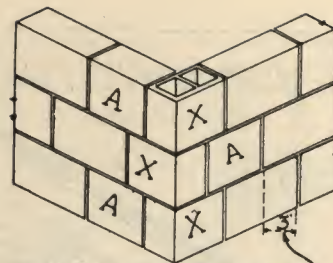


Detail for Bonding Corners and Finishing Around Openings of 8-Inch Hollow Tile Walls with Common Brick.



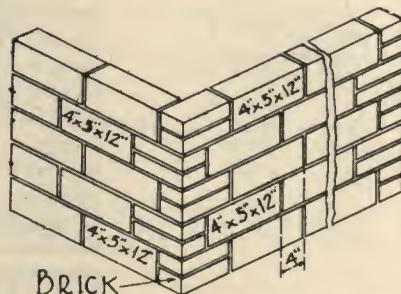
'A' FULL SIZE TILE 'B' HALF SIZE TILE

Diagram Showing Placing of Opening in Hollow Tile Wall Having a 6-Inch Bond Between Courses.

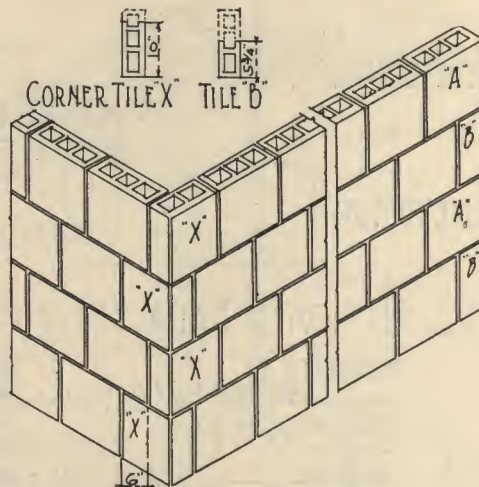
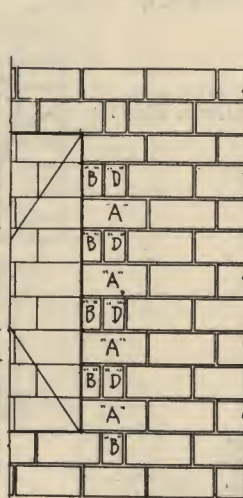


THIS BREAKING OF JOINTS
THROUGHOUT MAY BE MADE 6"
BY HAVING THE TILE MARKED
"A" CUT TO 9" LENGTHS.
X- 8"x5"x8" CORNER TILE

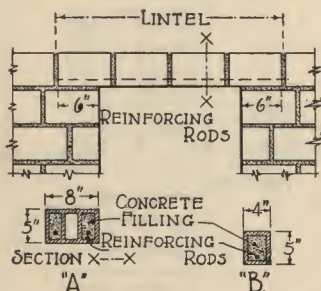
Corner Bonding Detail for
5-Inch Walls by 8 by 5 by 12-
Inch Hollow Tile.



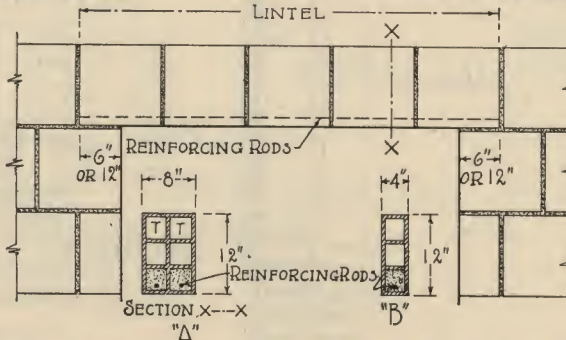
Detail for Bonding Corners and Finishing Around Openings of 4-Inch Hollow Tile Walls with Common Brick.



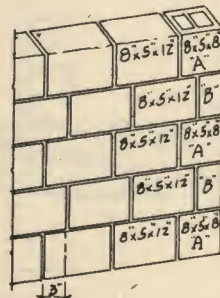
Corner and Jamb Detail for 4-Inch Walls of 4 by 12 by 12-Inch Hollow Tile. Detail for Wall 3 by 12 by 12-Inch Hollow Tile Would Be Similar, Excepting That Corner Tile "X" Would Be Cut as Close to 9 Inches as Possible.

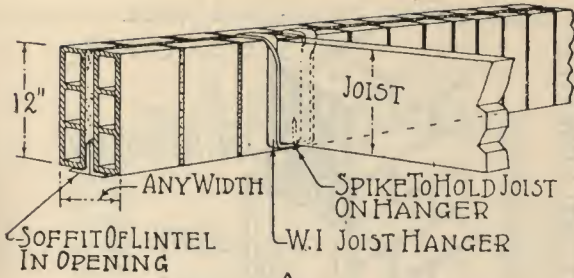


Section "A" for 8-Inch Walls of 8 by 5 by 12-Inch Tile; Section "B" for 4-Inch Walls of 4 by 5 by 12-Inch Tile and for Combining with Section "A" to Form Lintel for 12-Inch Wall Built of These Two Shapes. Similarly for 16-Inch Thick Wall Two Lintels of Section "A" Would Be Used.

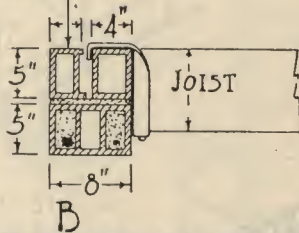


Section "A" for 8-Inch Walls of 8 by 12 by 12-Inch Tile; Section "B" for 4-Inch Walls of 4 by 12 by 12-Inch Tile and for Combining with Section "A" to Form Lintel for 12-Inch Wall. Lintels Made of Single Blocks Similar to Section "A" but 10 and 12 Inches in Thickness, Are Used for 10 and 12-Inch Walls, Respectively. All Lintels for Section "A" Type for Fairly Wide Openings, Particularly for 10 and 12-Inch Walls, Should Have One or Both of the Cells "T" Filled with Concrete, Reinforced with a Light Rod or Heavy Wire to Prevent Breakage in Handling.

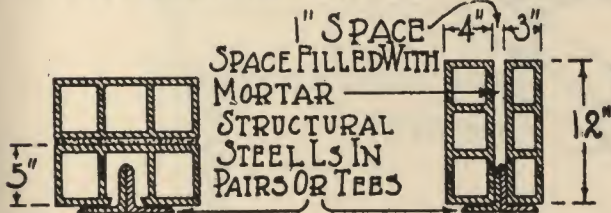




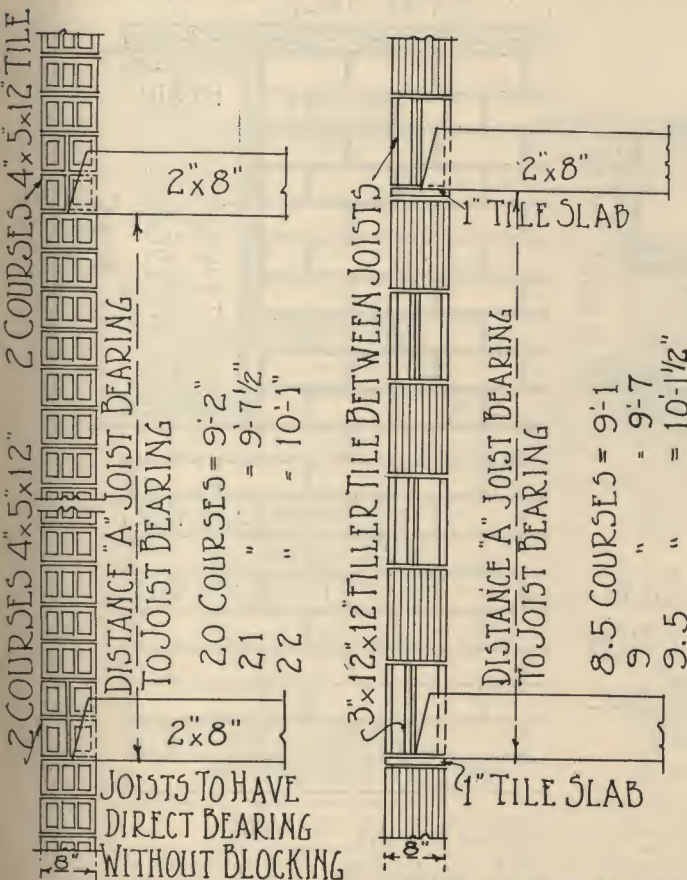
ONE CELL SECTION OF THE
8x5x12" TILE



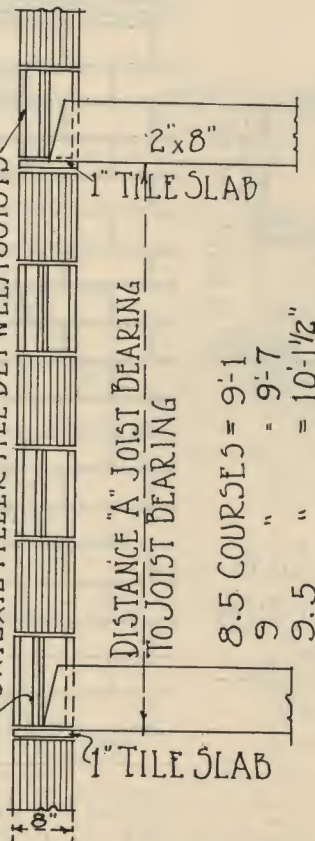
Joist Hangers May Be Used with Various Types of Lintels to Keep Head of Window Opening Close to the Ceiling Line.



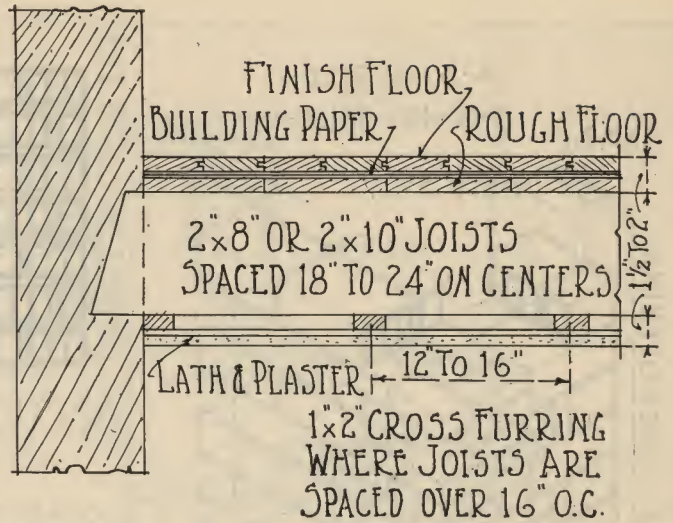
Lintels for Structural Shapes. Section "A" for 8-Inch Walls of 8 by 5 by 12-Inch Tile; Section "B" for 8-Inch Walls of 8 by 12 by 12-Inch Tile. The Size and Weight of Steel Shapes Required by Any Span and Loading May Be Figured from the Carnegie or Other Structural Steel Handbook. These Lintels Should Usually Have 12-Inch Bearing.



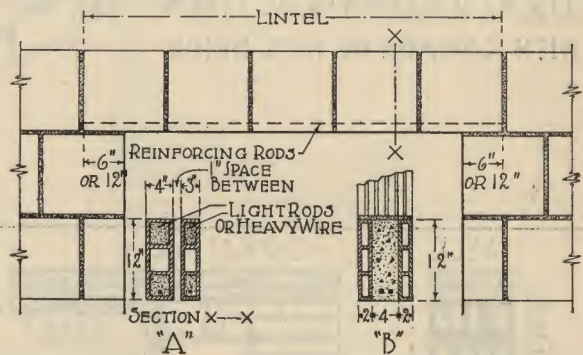
Vertical Section of Wall of 8 by 5 by 12-Inch Load Bearing Tile Laid on the Side.



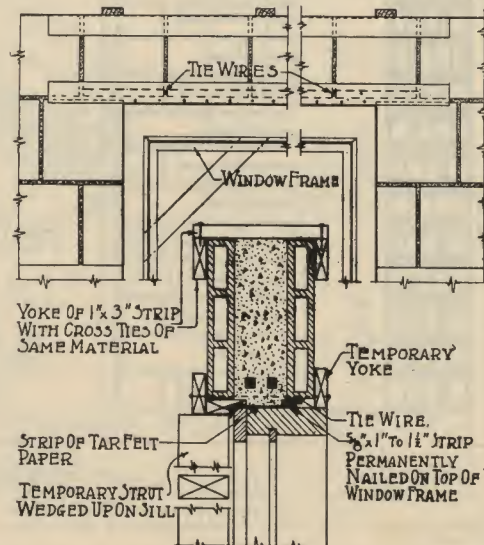
Vertical Section of Wall of 8 by 12 by 12-Inch Load Bearing Tile Set on End.



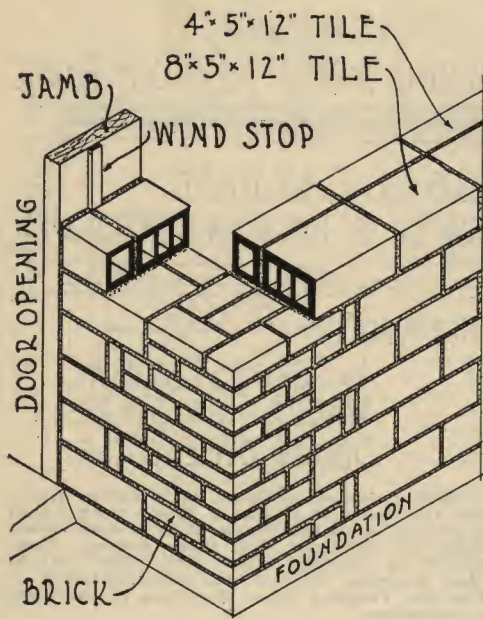
Total Depth of Floor Construction Taken as 10 Inches Where 2 by 6-Inch Joists Are Used; as 12 Inches Where 2 by 8-Inch Joists Are Used, and as 14 Inches Where 2 by 10-Inch Joists Are Used. Actually the Thickness Will Often Average About 1 Inch Less Than These Figures, Which Will Allow for the Leveling Up of Any Irregular Joist, or the Cross Stripping of Underfloor, so That the Finished Floor May Run in the Same Direction as the Underfloor.



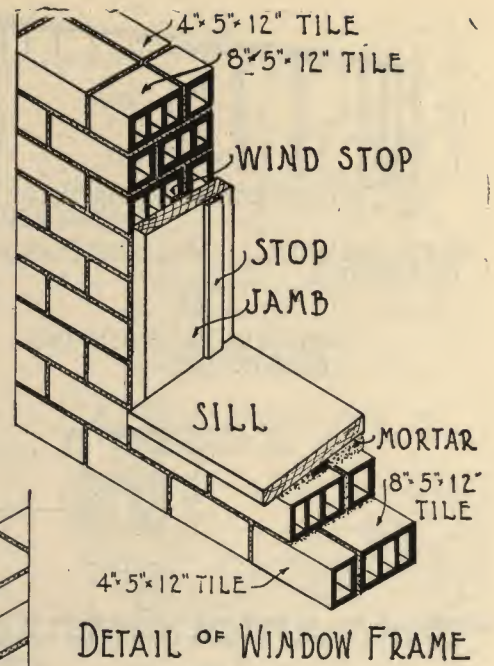
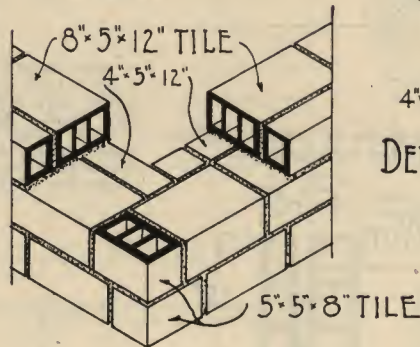
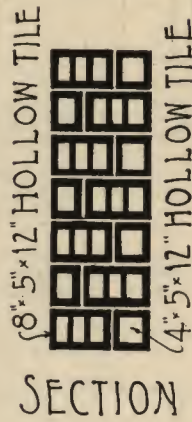
Section "A" for 8-Inch Walls of 8 by 12 by 12-Inch Tile; Section "B" for 4-Inch Walls of 4 by 12 by 12-Inch Tile and for Combining with Section "A" to Form Lintel for 12-Inch Wall. Lintels Made of Single Blocks Similar to Section "A" But 10 and 12 Inches in Thickness, Are Used for 10 and 12-Inch Walls, Respectively. All Lintels for Section "A" Type for Fairly Wide Openings, Particularly for 10 and 12-Inch Walls, Should Have One or Both of the Cells "T" Filled with Concrete, Reinforced with a Light Rod or Heavy Wire to Prevent Breakage in Handling.



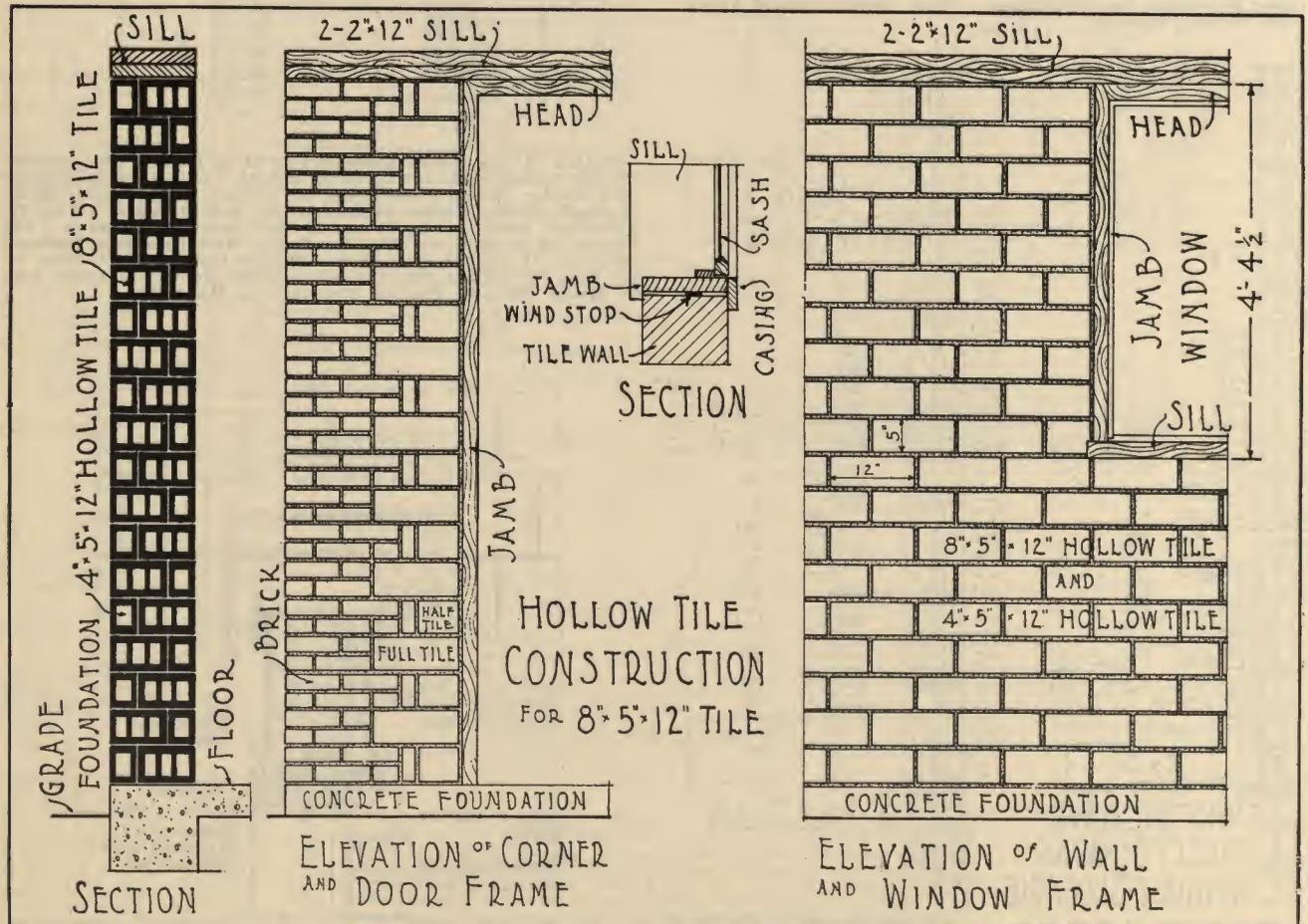
Details for Temporary Form Used for the Building of Lintels.

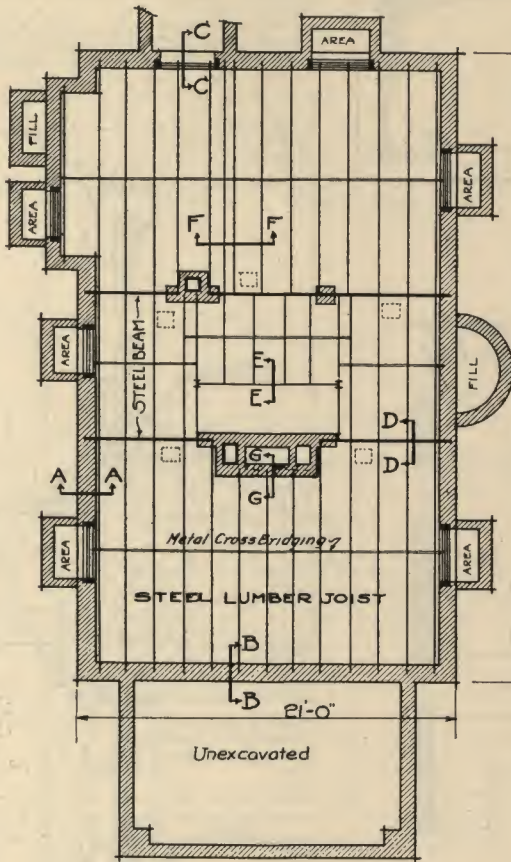


CORNER CONSTRUCTION
WITH COMMON OR FACE BRICK



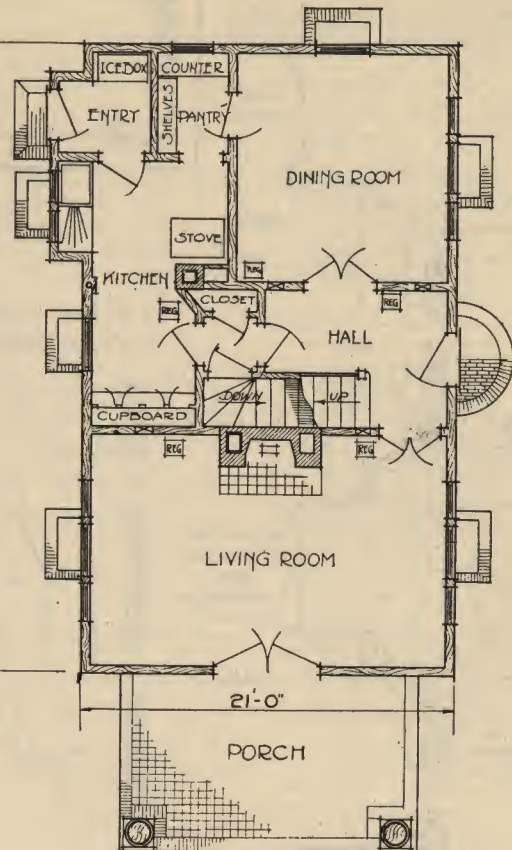
DETAIL OF WINDOW FRAME



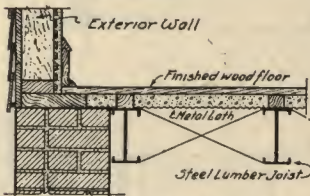


BASEMENT PLAN

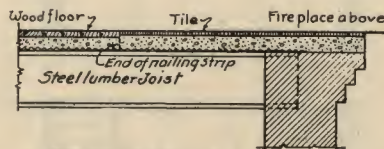
SHOWING STEEL LUMBER LAYOUT FOR FIRE SAFE FIRST FLOOR.



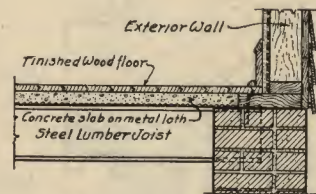
FIRST FLOOR PLAN



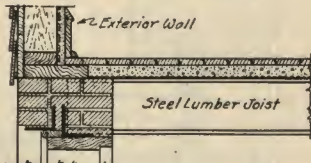
SECTION-AA



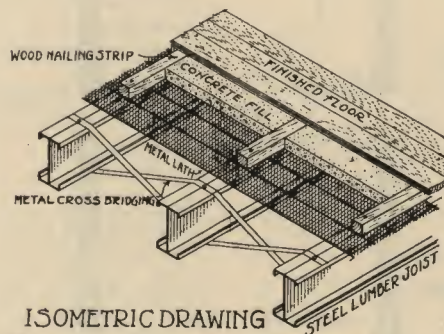
SECTION-GG



SECTION-BB

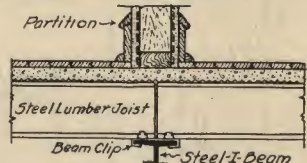


SECTION-CC

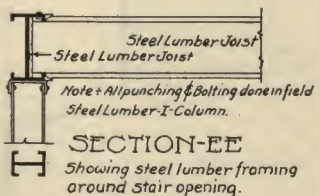


ISOMETRIC DRAWING

Showing steel lumber floor construction.

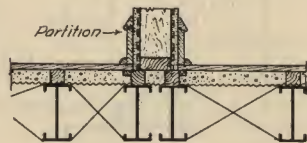


SECTION-DD

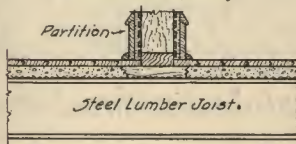


SECTION-EE

Showing steel lumber framing around stair opening.

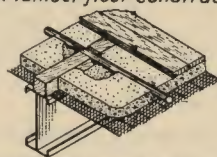


SECTION-FF



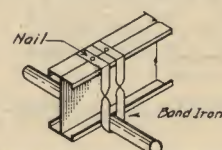
DETAIL

Showing partition running at right angle to steel lumber joist.



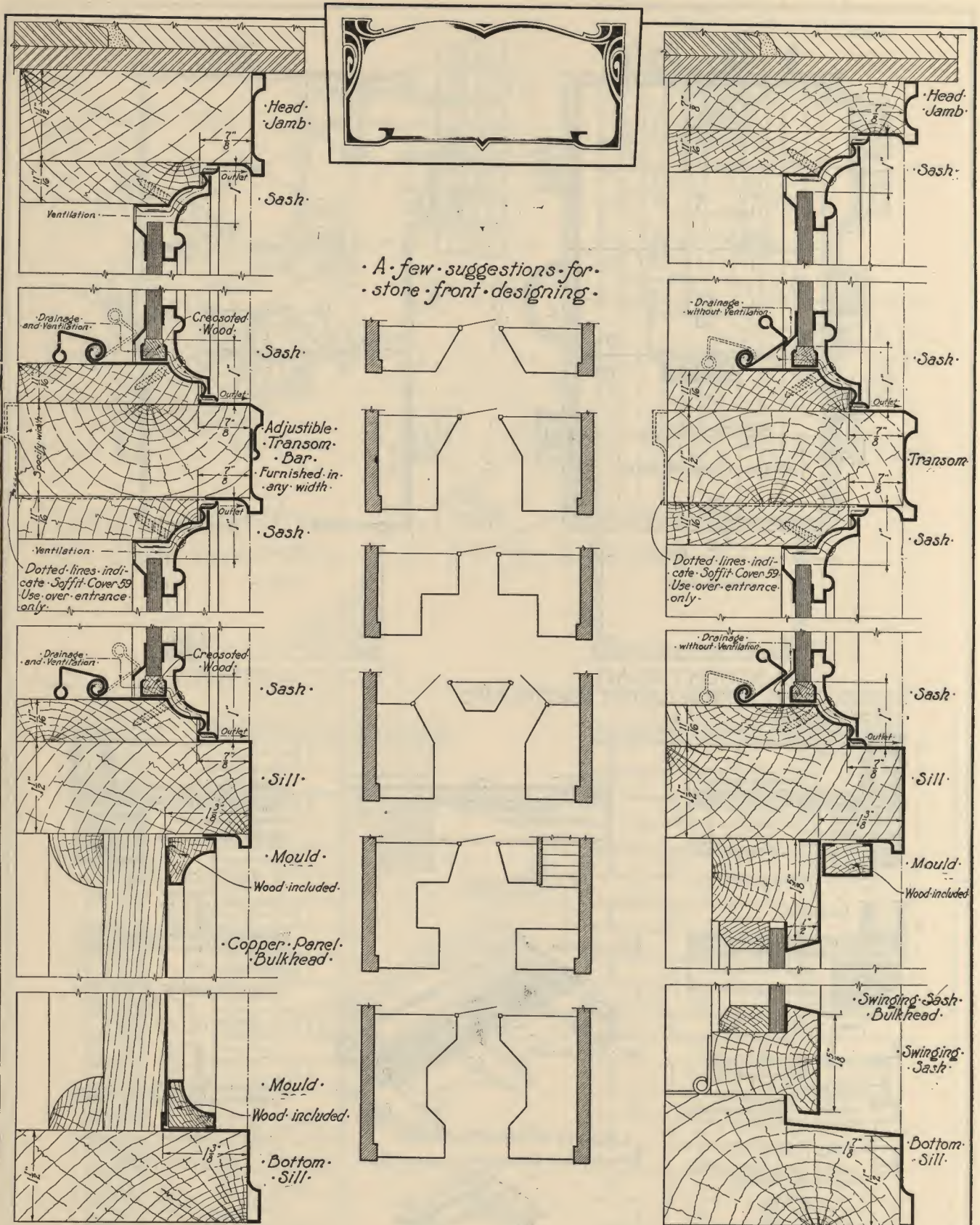
ISOMETRIC DRAWING

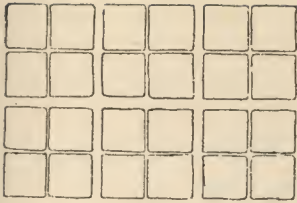
Showing nailing strip notched out so that water pipes or wire conduits can be placed under wood floor into concrete slab.



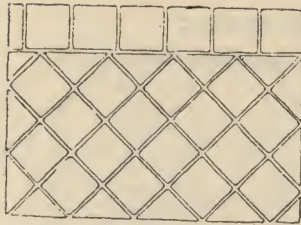
ISOMETRIC DRAWING

Showing method used to suspend pipes from steel lumber floor joist.

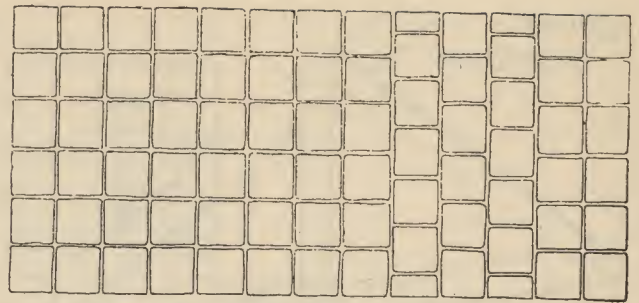
*Vertical Section thru Store Front.**Vertical Section thru Store Front.*



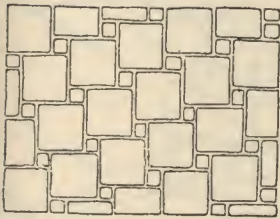
By groups of four squares as a unit separated by wider joints, the scale is increased.



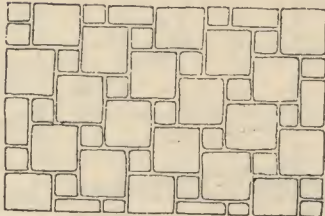
A diagonal pattern of square tiles is emphasized by a border.



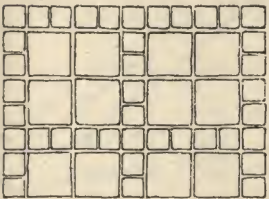
By a few rows of broken joints, an effect of border is produced in a field of square tiles.



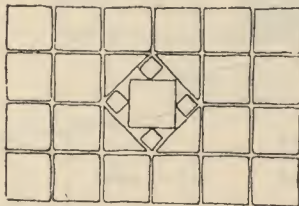
When the small squares are less than one-quarter of the area of the large squares, the pattern runs off at the side.



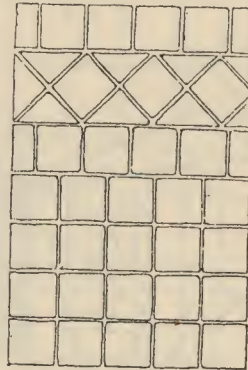
When the small squares are one quarter of the area of the large squares, the pattern has more repose.



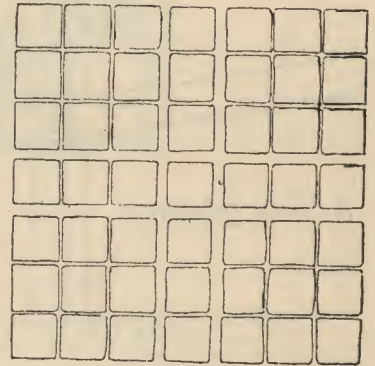
Another way to increase the scale with small tiles.



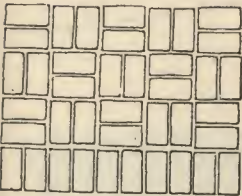
A decorative pattern that can be made on the job.



By breaking joints in one course, the border is made wide.



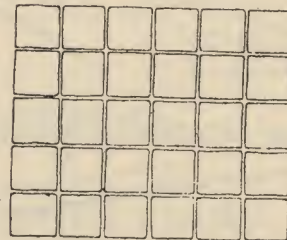
An arrangement adapted to large rooms.



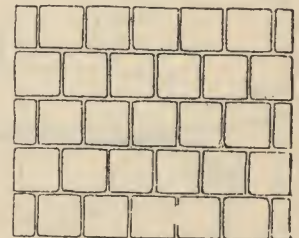
When double squares are laid "basket pattern," the necessary allowance for joints adds interest.



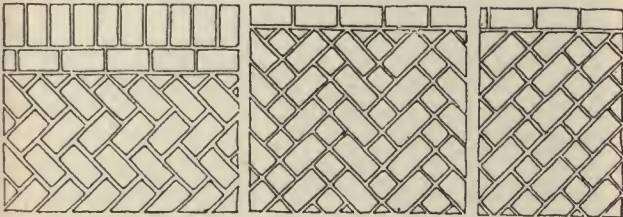
A good pattern for corridors.



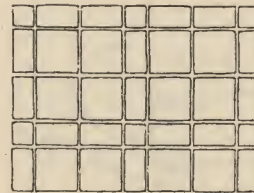
The simplest floor of square tiles is interesting if the joints are in scale.



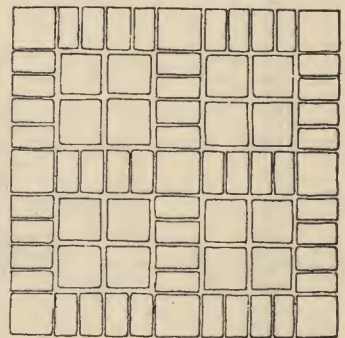
When square tiles are laid with broken joints, long lines in one direction are the result.



Varieties of "herringbone."

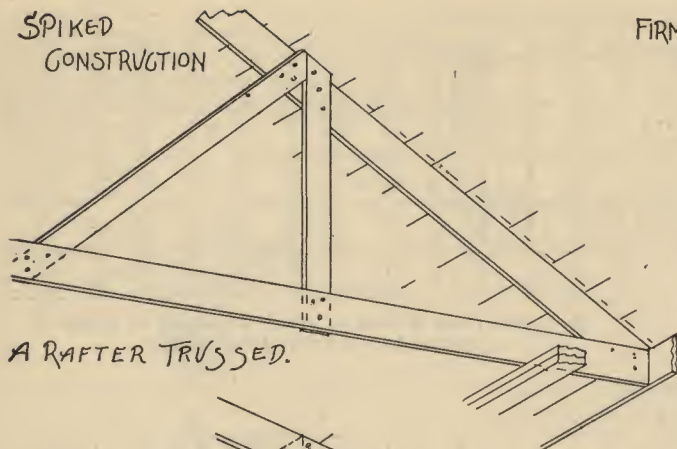


Two combinations suggesting plaids.

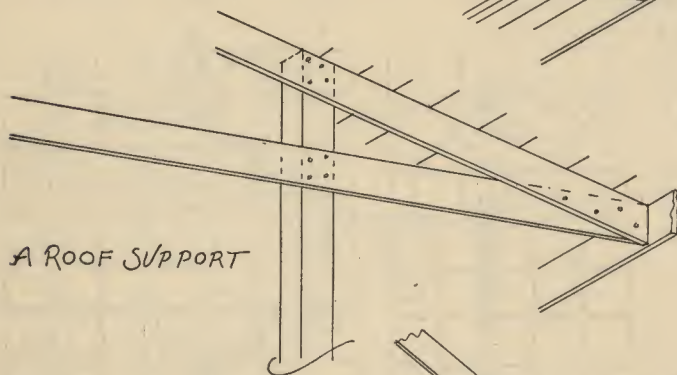


A simple device for a panel or a floor for a large room.

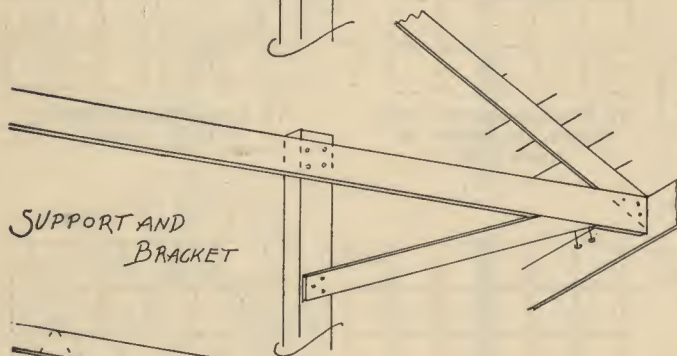
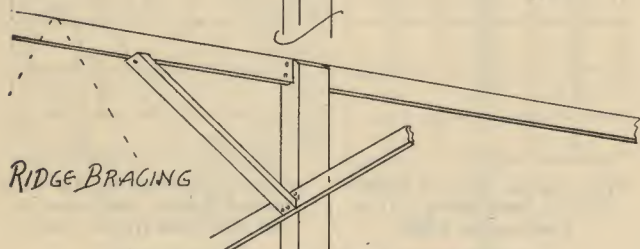
SUGGESTIVE PATTERNS FOR TILE FLOORS.

SPIKED
CONSTRUCTION

A RAFTER TRUSSED.

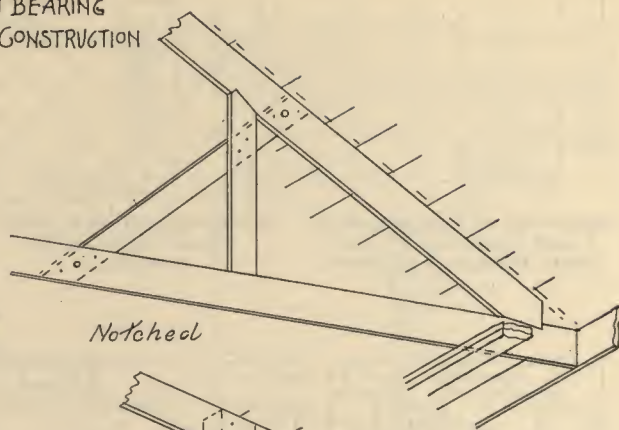


A ROOF SUPPORT

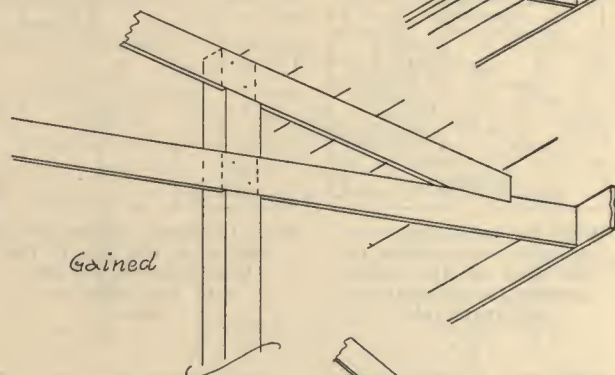
SUPPORT AND
BRACKET

RIDGE BRACING

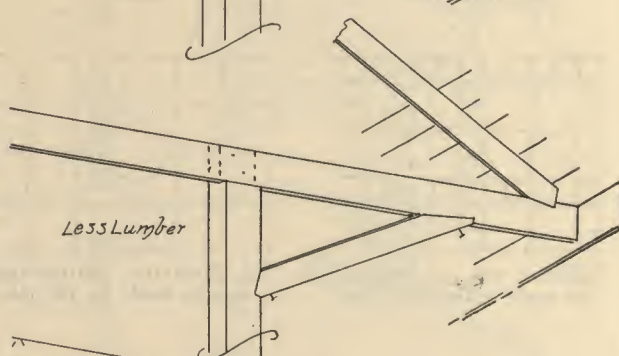
SKETCHES AT THE BUILDING.

FIRM BEARING
CONSTRUCTION

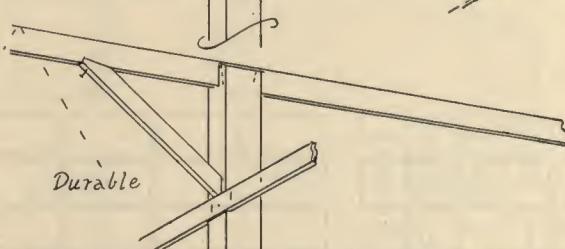
Notched



Gained

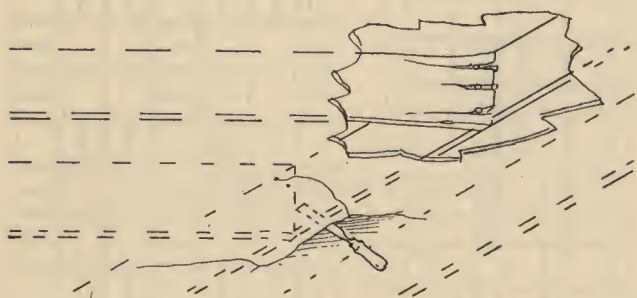


Less Lumber

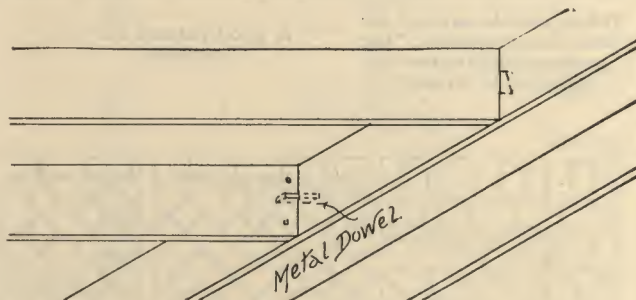


Durable

FRAMING AS IT SHOULD HAVE BEEN.



LOOSENS WITH JARRING.
Is supported by the floor boards.
Sags and cracks the plastering.



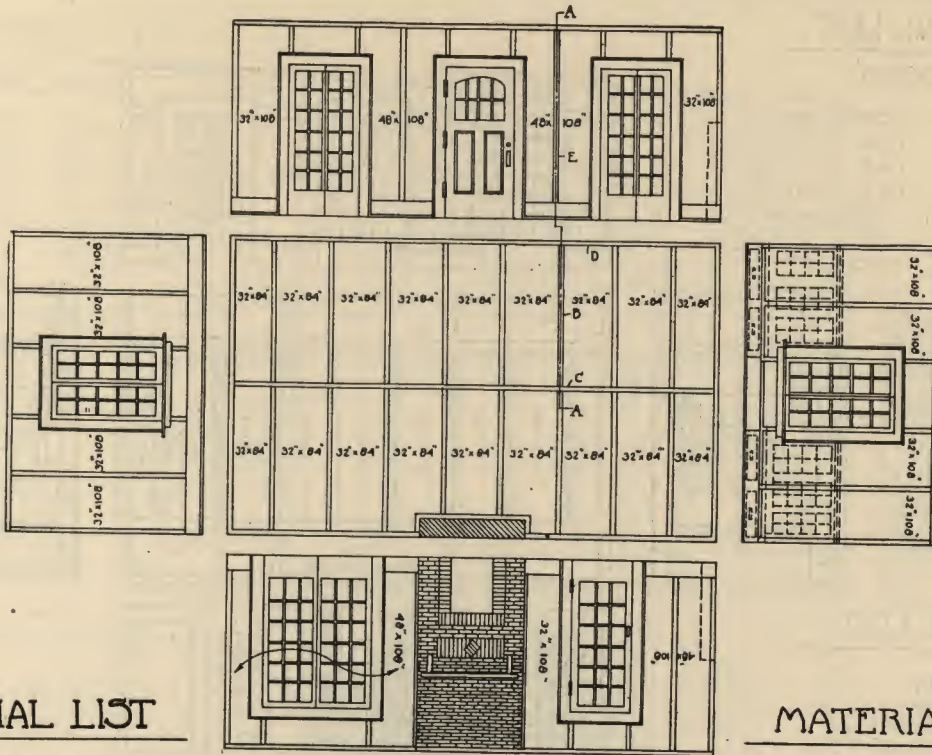
THE OLD WAY OF MORTICING
or Preferable Dowel

JOIST HEADERS.

What Happens to Spiked Joists; Dowelling Recommended.

At the Left Is How Our Inspector Found the Work Being Done; at the Right the Better Way Is Shown.

GOOD AND BAD IN CARPENTRY WORK.



MATERIAL LIST

WALL BOARD

18- 32"x84"	336	5Q FT
11- 32"x108"	264	" "
1- 48"x96"	32	" "
4- 48"x108"	144	" "
1- 48"x120"	40	" "
	816	" "

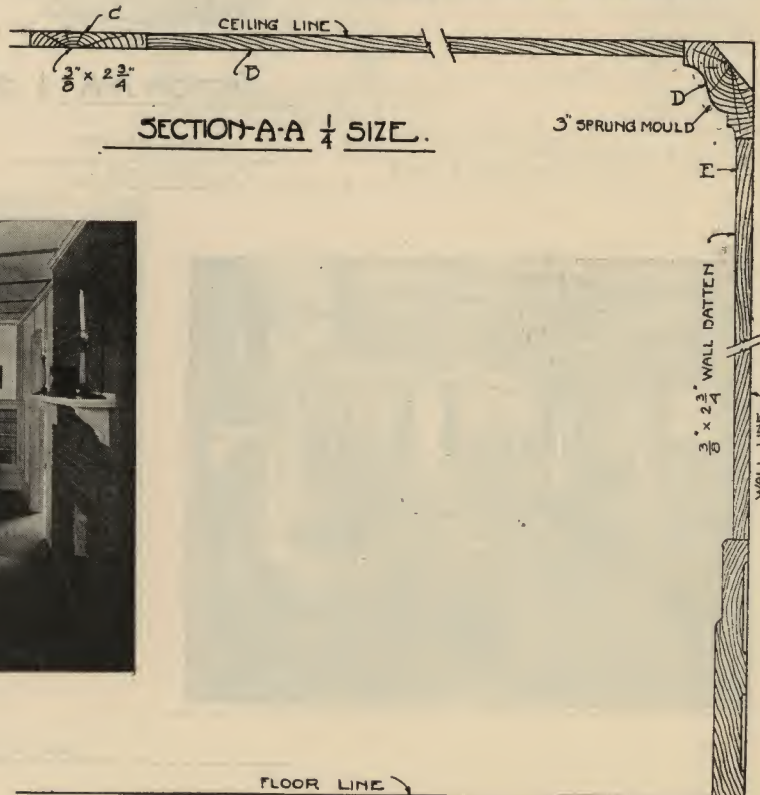
SIZE . 22'-9" x 13'-10" x 9'-0"

MATERIAL LIST

TRIM

78. LIN FT. 3" SPRUNG MOULD	
18- Pcs 3/8" x 2 3/4" - 9'-0" LONG	BATTENS
4- " " " 12'-0" "	
8- " " " 14'-0" "	

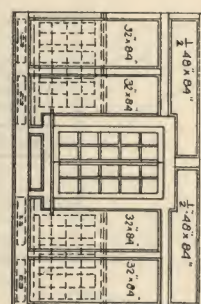
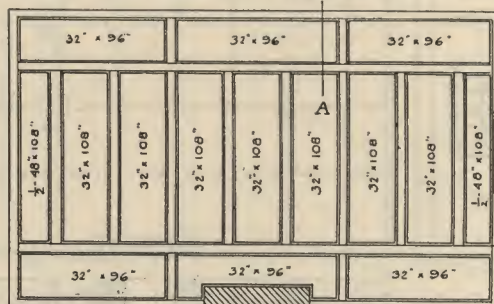
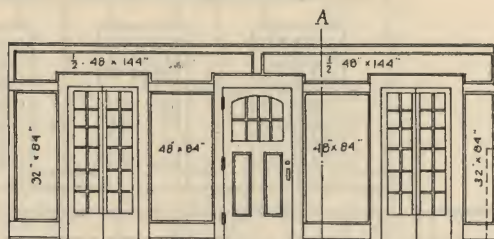
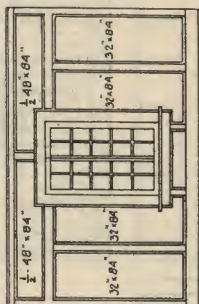
This List does not include door or window trim nor baseboard



MATERIAL LIST

WALL BOARD

11- 32" x 84"	205 $\frac{1}{3}$	50 FT
6- 32" x 96"	128	" "
7- 32" x 108"	168	" "
6- 48" x 84"	168	" "
2- 48" x 108"	72	" "
1- 48" x 144"	48	" "
		789 $\frac{1}{3}$ 50 FT.



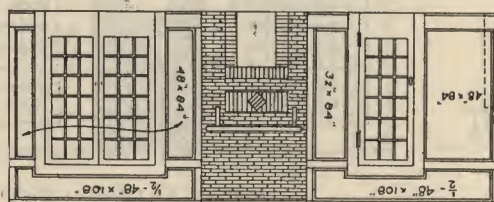
MATERIAL LIST

TRIM

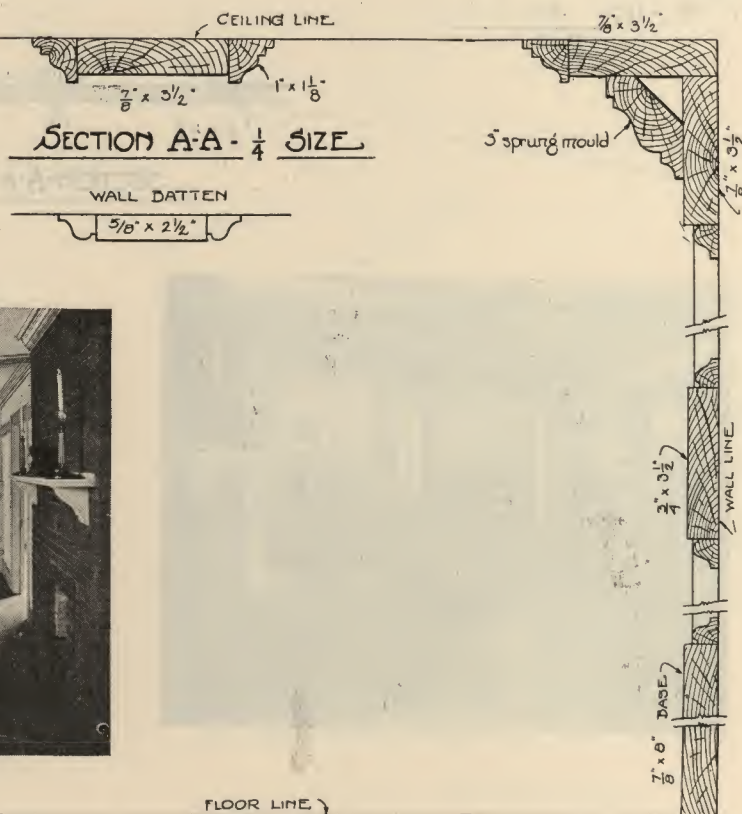
WITH FLAT BEAMS

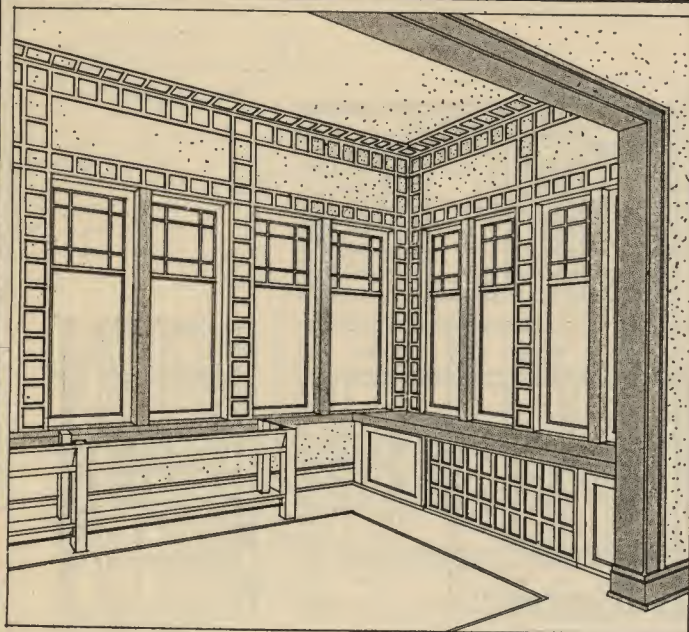
6 Pcs $\frac{5}{8}$ " x $3\frac{1}{2}$ " - 9'	} 282 Lineal feet
12 " " " 12'	
6 " " " 14'	
324 lin ft 1" x $\frac{1}{8}$ " Cove for ceiling	
76 " " 3" Sprung mould	
40 " " $\frac{3}{4}$ " x $3\frac{1}{2}$ " Dorder Mould	
7 Pcs $\frac{5}{8}$ " x $2\frac{1}{2}$ " - 16' long Wall batter.	
444 lin' ft $\frac{5}{8}$ " x $\frac{3}{4}$ " spec panel mould	

All door & window trim and baseboard should be square edge material, no moulded edges

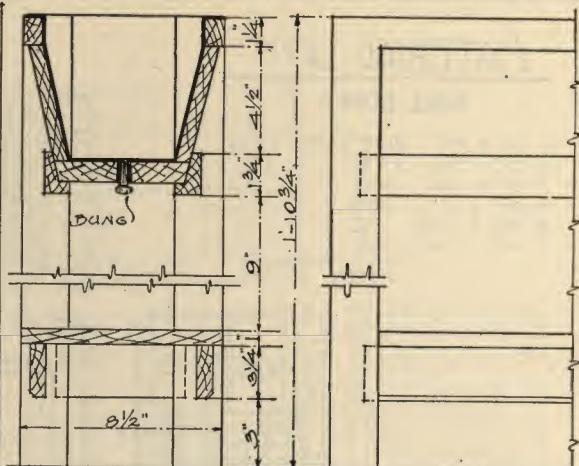


SIZE: 22'-9" x 13'-10" x 9'-0"

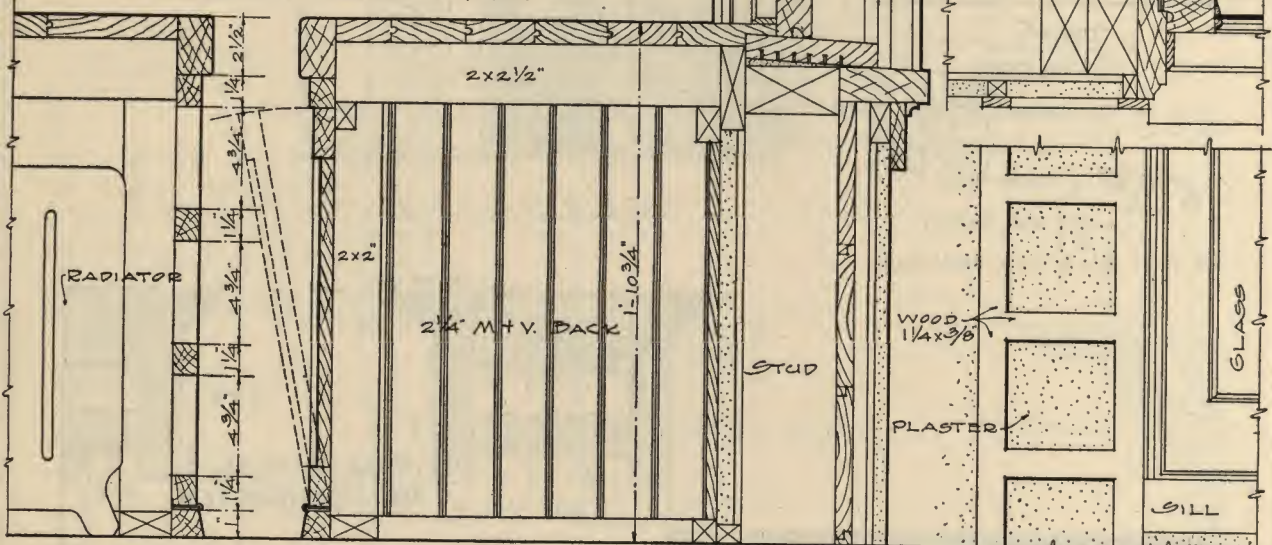




• PERSPECTIVE •



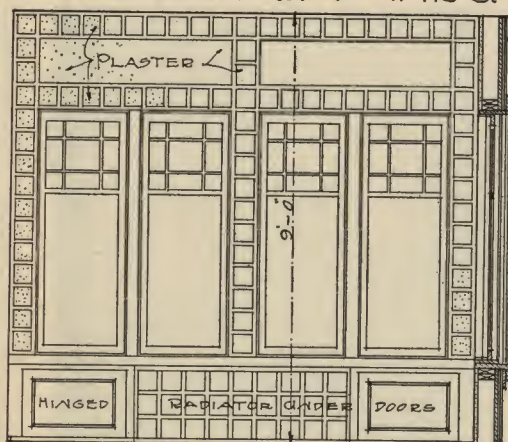
• DETAIL OF •
• FLOWER BOX •



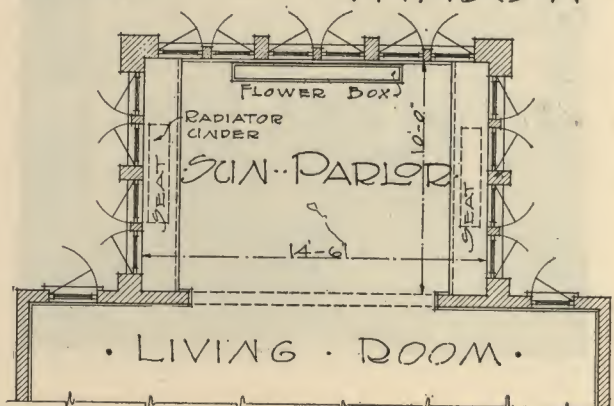
• SECTION THRU SEAT •

SCALE 1/2" = 1'-0"

• DETAIL OF •
• WINDOW •



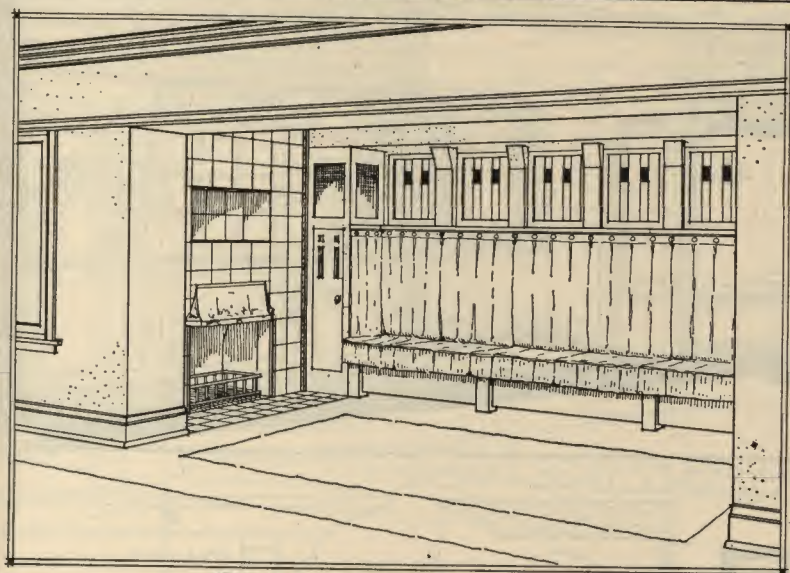
• END ELEVATION •
SCALE 1/4" = 1'-0"



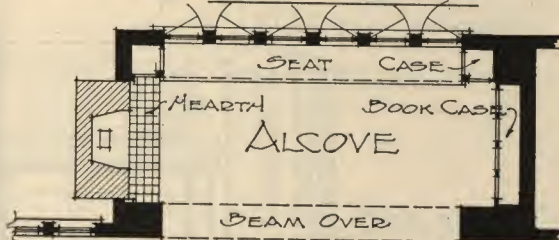
• PLAN • SCALE 1/8" = 1'-0"

HOUSE INTERIORS • A • SUN-PORCH

Perspective Sketch, Elevation, Plan and Construction Details of a Sun Parlor Finished in Lattice Style Suggesting the Outdoors.



PERSPECTIVE

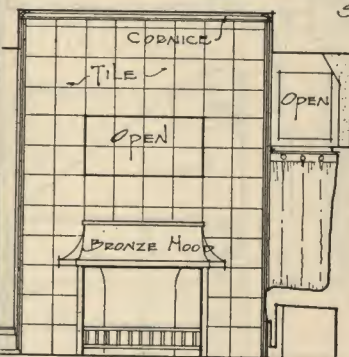
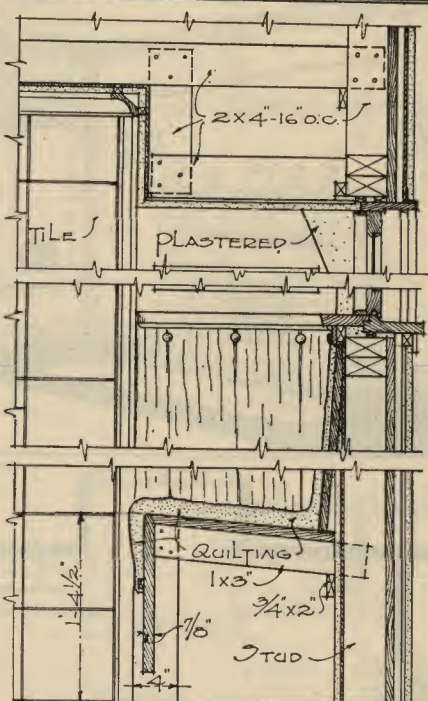


PLAN OF ALCOVE

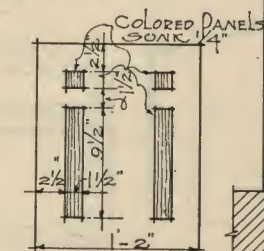
SCALE $\frac{1}{8}" = 1'-0"$

SCALE OF
DETAILS =
 $\frac{3}{4}"$ TO $1'-0"$

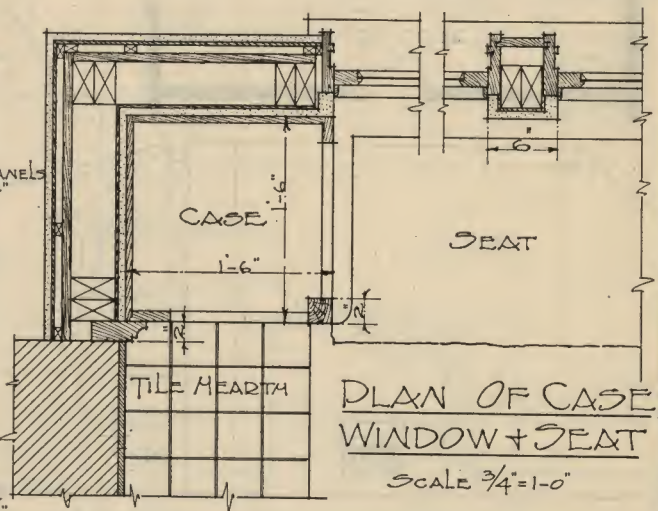
SECTION THRU SEAT



END ELEVATION



DETAIL OF
CASE DOOR
SCALE $\frac{3}{4}" = 1'-0"$

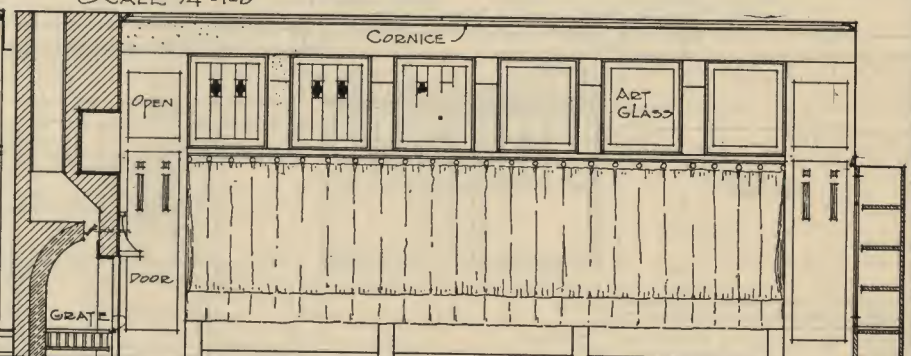


PLAN OF CASE
WINDOW + SEAT

SCALE $\frac{3}{4}" = 1'-0"$



END ELEVATION

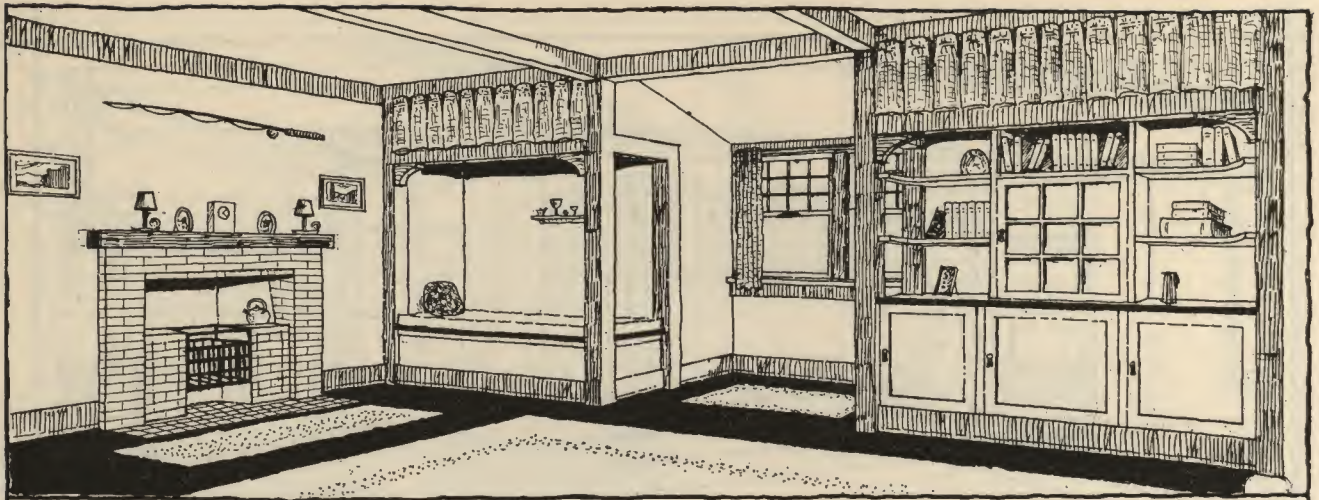


ELEVATION

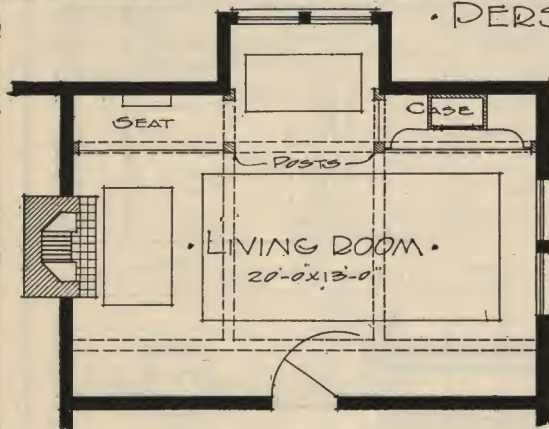
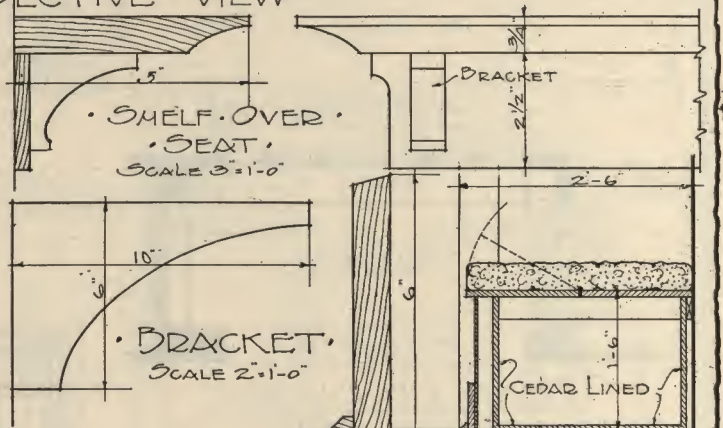
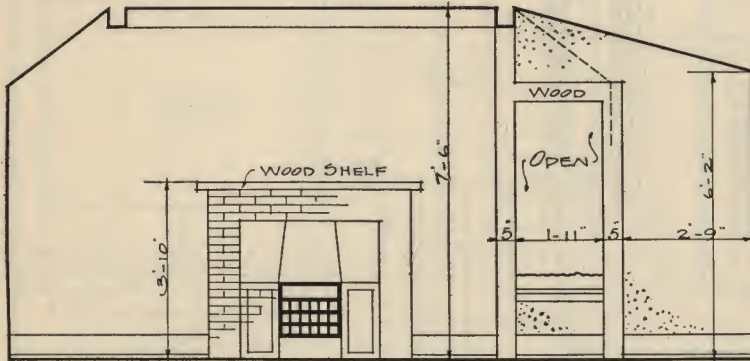
SCALE $\frac{1}{4}" = 1'-0"$

'A LIVING ROOM ALCOVE'

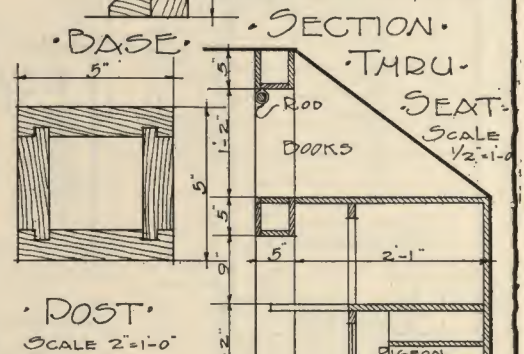
Architect's Sketch Showing Details of Living Room Alcove, Including Comfortable Upholstered Seat with Art Glass Windows Above, Bookcases and Fireplace in Tile with Bronze Hood.



• PERSPECTIVE • VIEW •

• LIVING ROOM •
20'-0" x 13'-0"• SHELF OVER •
• SEAT •
SCALE 3'-1-0"• BRACKET •
SCALE 2'-1-0"

• END ELEVATION • SCALE 1/4"=1'-0"

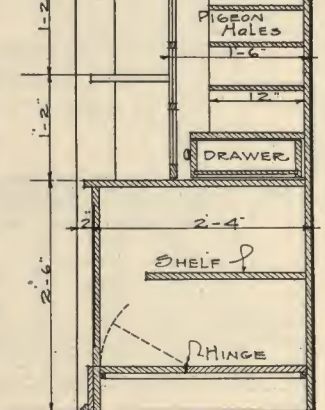


• BASE •

• SECTION •

• THRU •
• SEAT •
SCALE 1/2"=1'-0"• POST •
SCALE 2'-1-0"

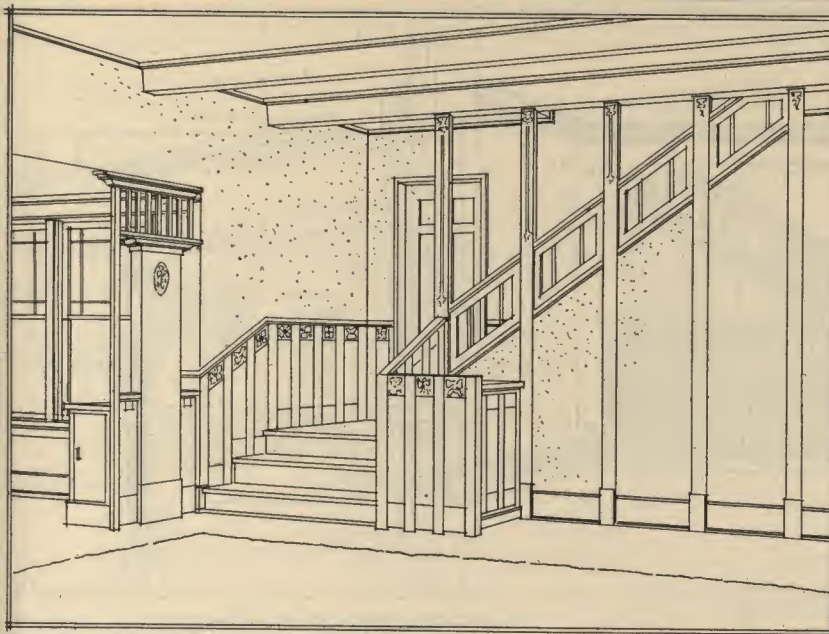
SCALE 1/4"=1'-0" • ELEVATION •



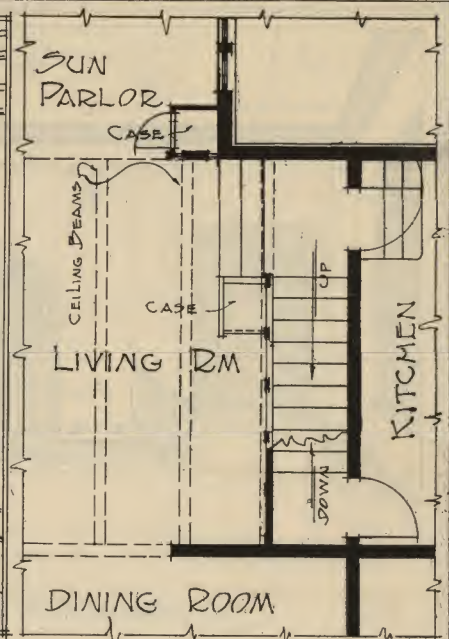
• SECTION •

AN ATTIC LIVING ROOM

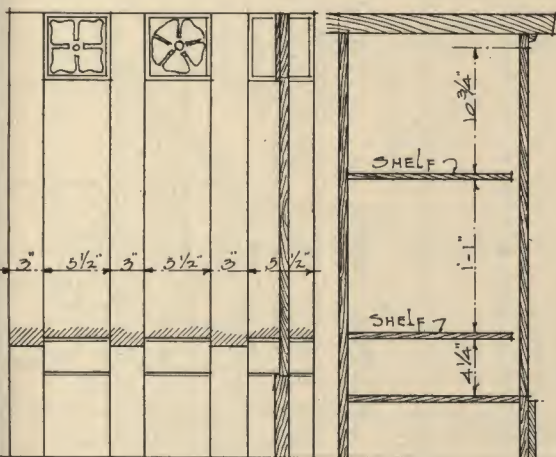
Sketch, Plan, Elevations and Construction Details of an Attic Living Room.



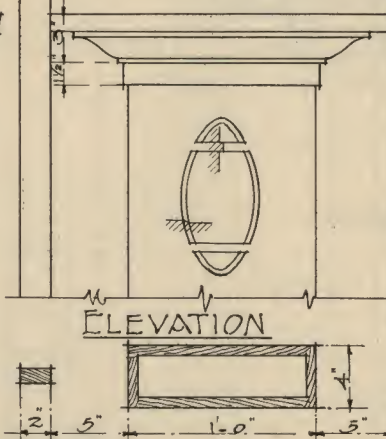
PERSPECTIVE



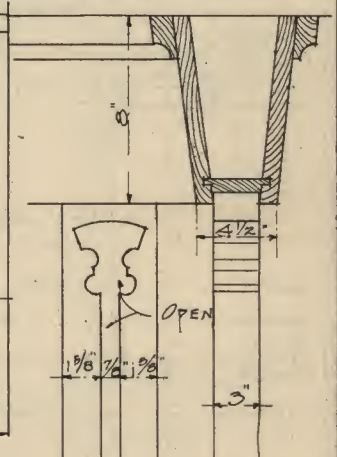
PLAN
SCALE 1/8"=1'-0"



ELEVATION OF CASE
SCALE 3/4"=1'-0"



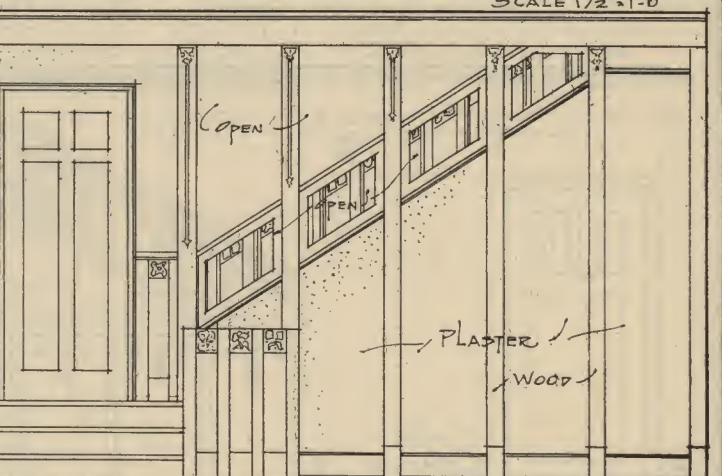
PLAN OF PYLON
SCALE 1"=1'-0"



DETAIL OF UPRIGHT
SCALE 1/2"=1'-0"

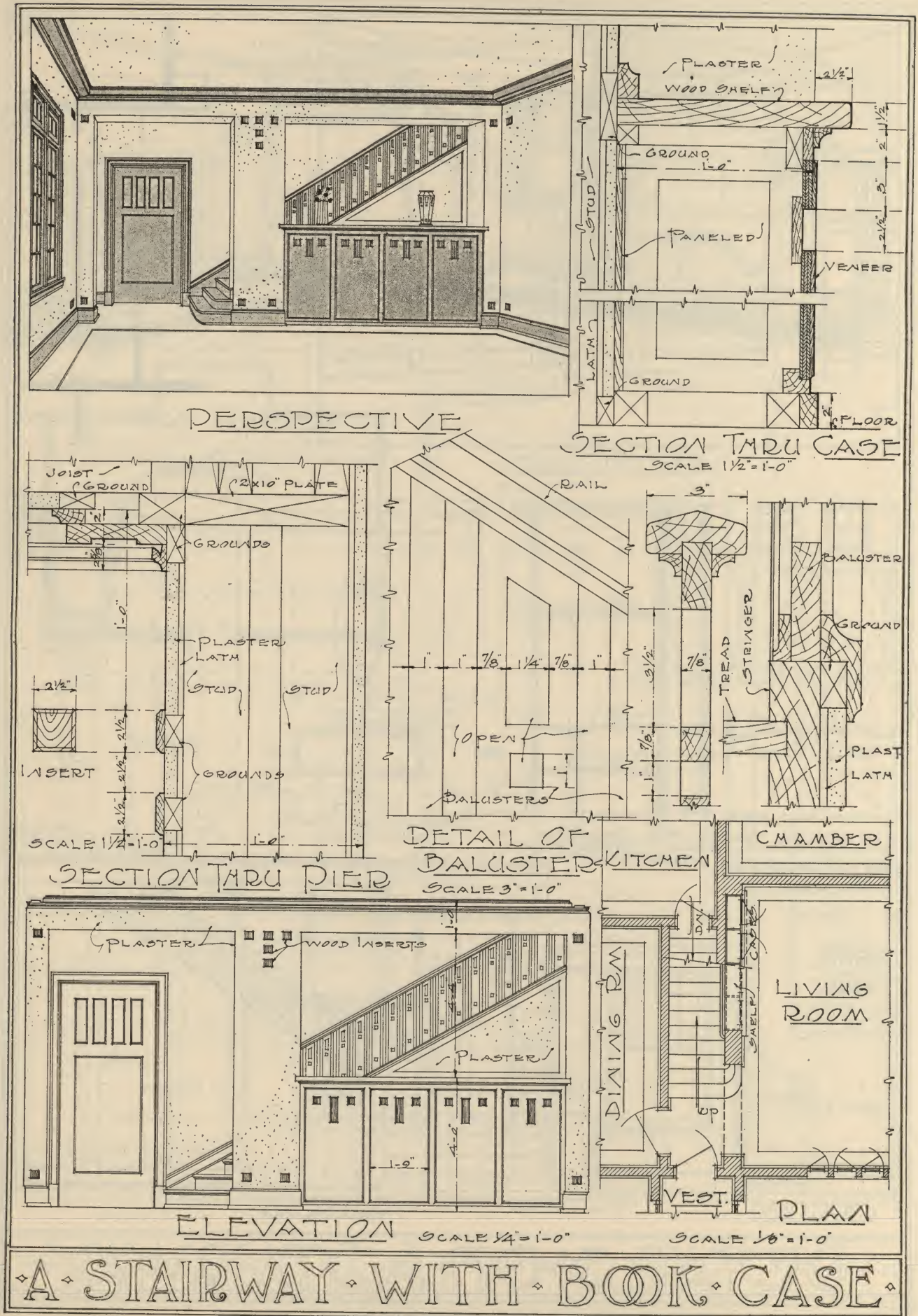


SECTION
SCALE 1/4"=1'-0"

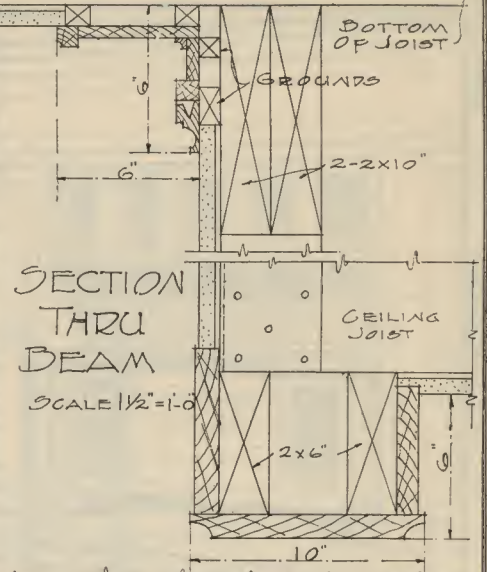
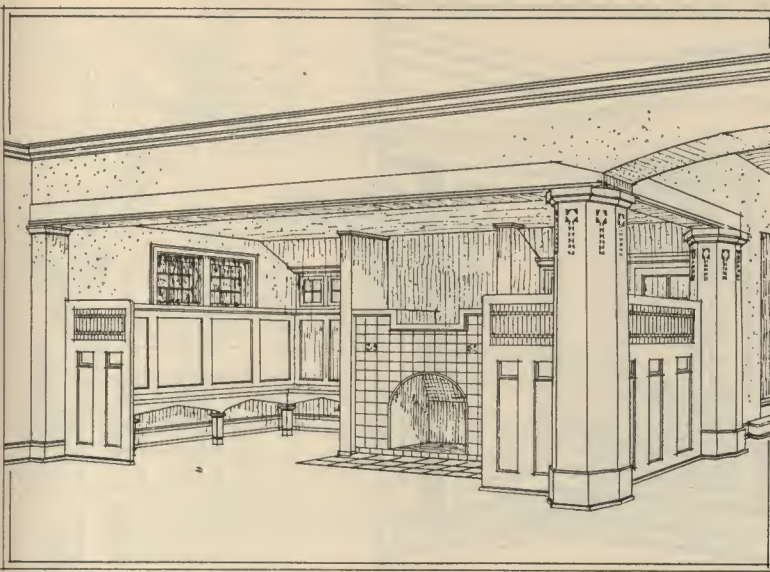


ELEVATION

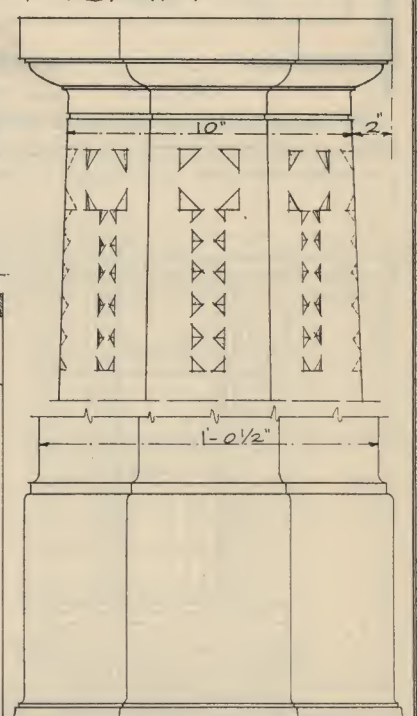
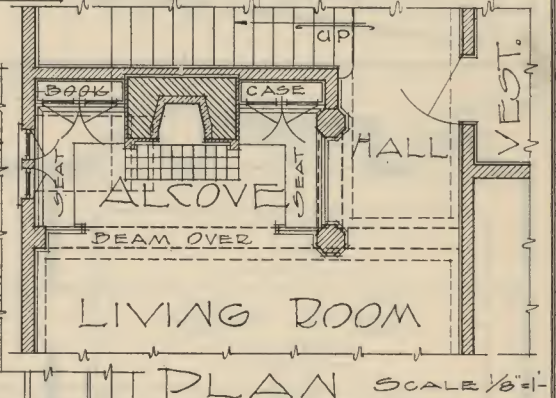
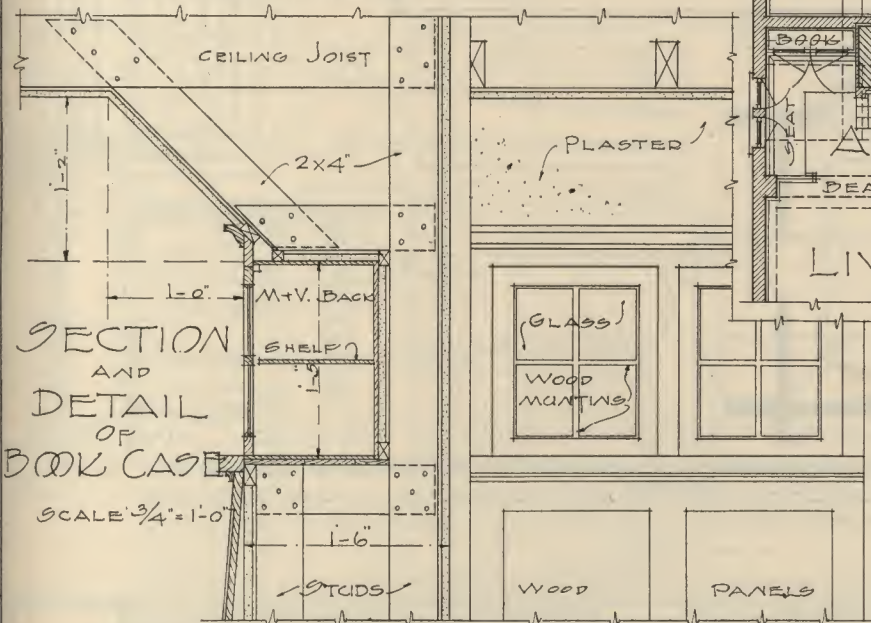
DETAILS OF A STAIRWAY



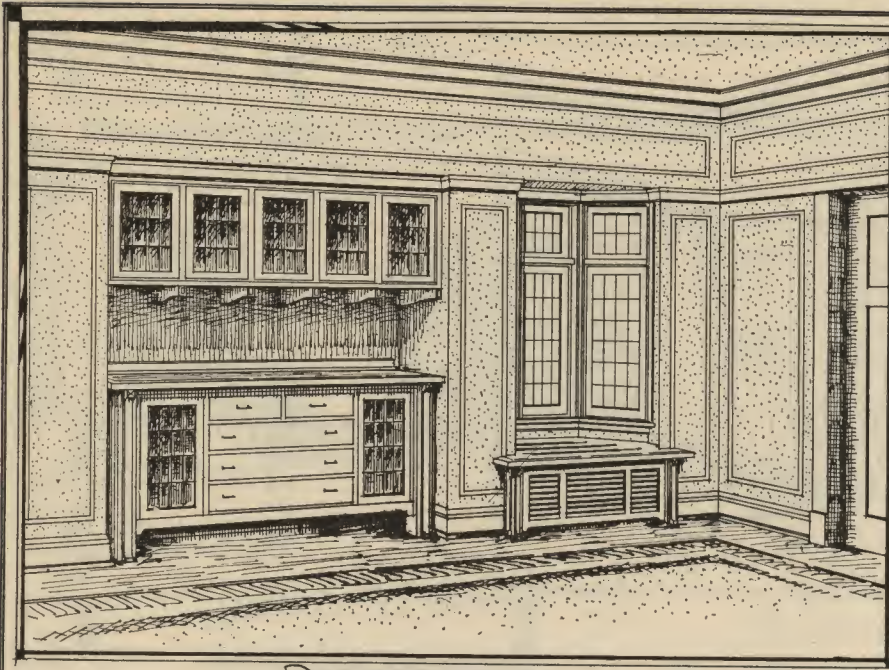
Perspective Sketch, Elevation, Plan and Scale Details of Semi-Open Stair Handled in the Modern Straight Line Style.



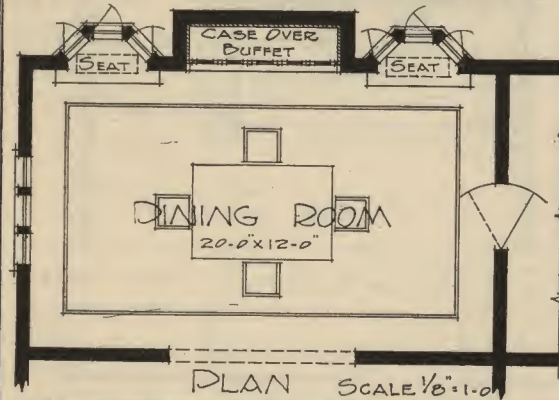
PERSPECTIVE



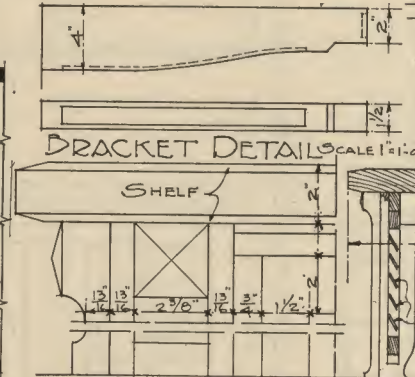
A FIREPLACE ALCOVE



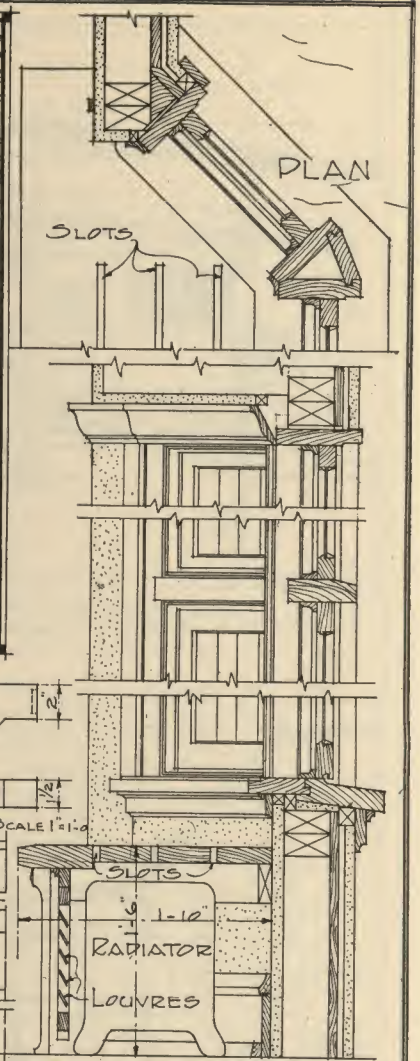
PERSPECTIVE



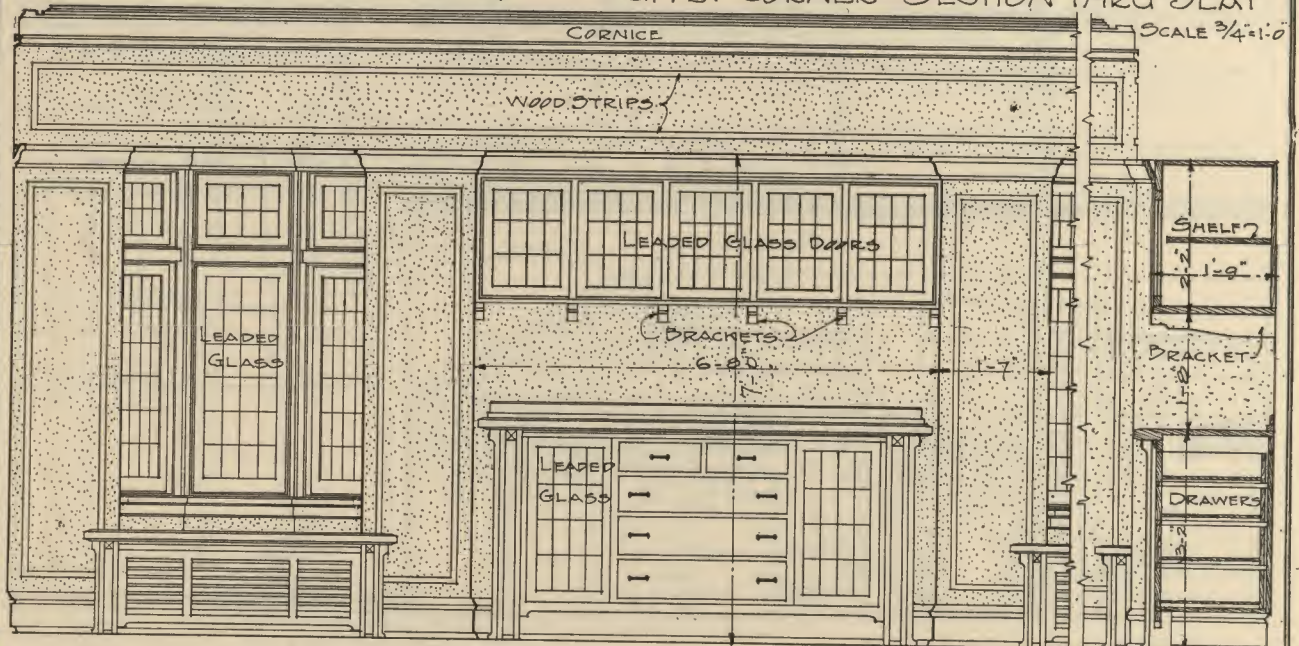
PLAN SCALE 1/8" = 1'-0"



BRACKET DETAILS SCALE 1" = 1'-0"



SCALE 3/4" = 1'-0"



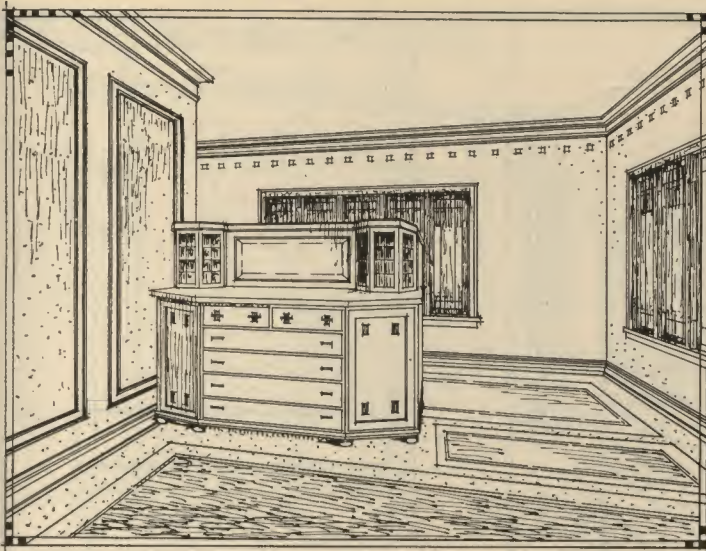
ELEVATION

SCALE 3/8" = 1'-0"

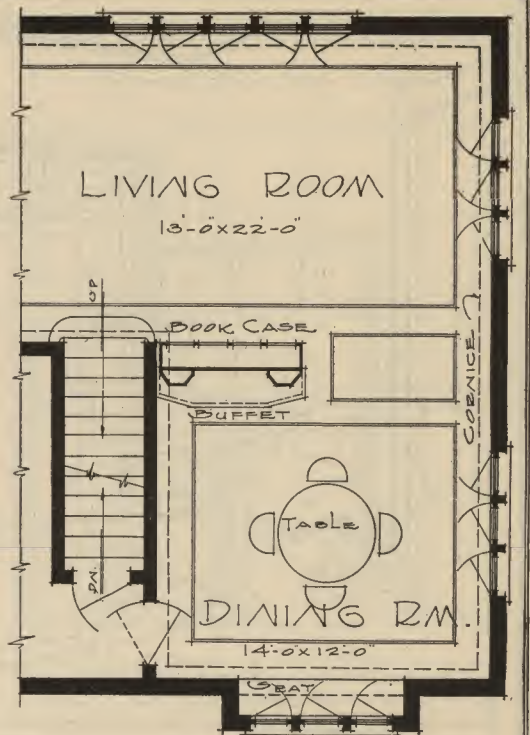
SECTION

A DINING ROOM INTERIOR

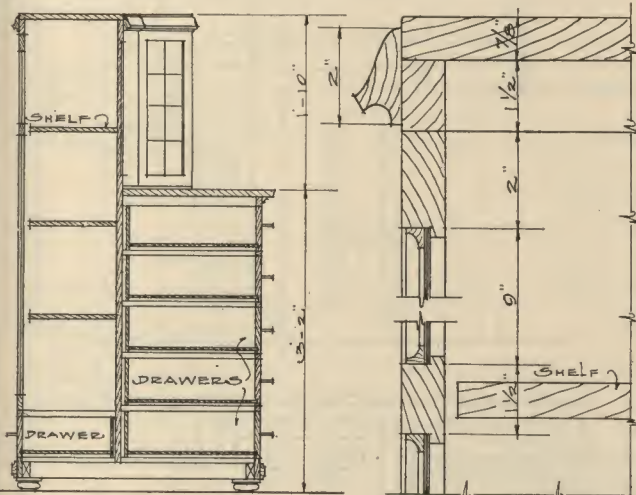
Sketch, Floor Plans, Elevations and Details of Interesting Dining Room Interior.



PERSPECTIVE

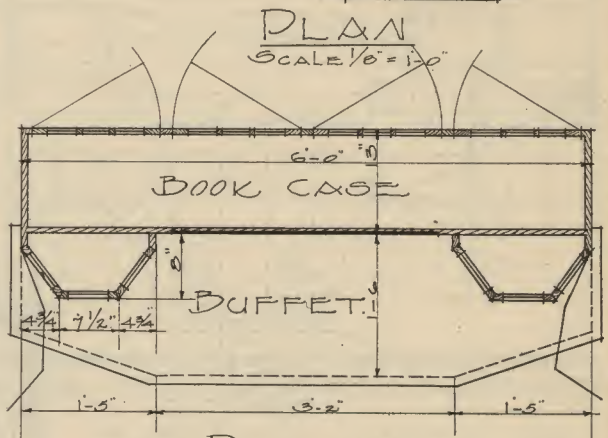


PLAN
SCALE 1/8" = 1'-0"

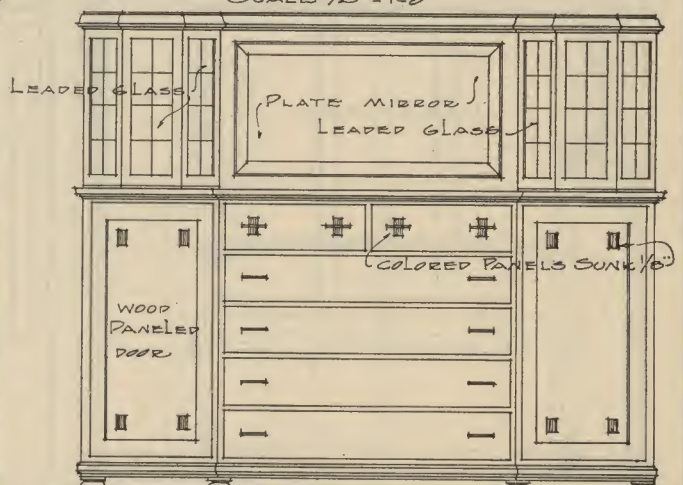


SECTION
SCALE 1/2" = 1'-0"

SECTION THRU
TOP OF CASE
SCALE 3/8" = 1'-0"

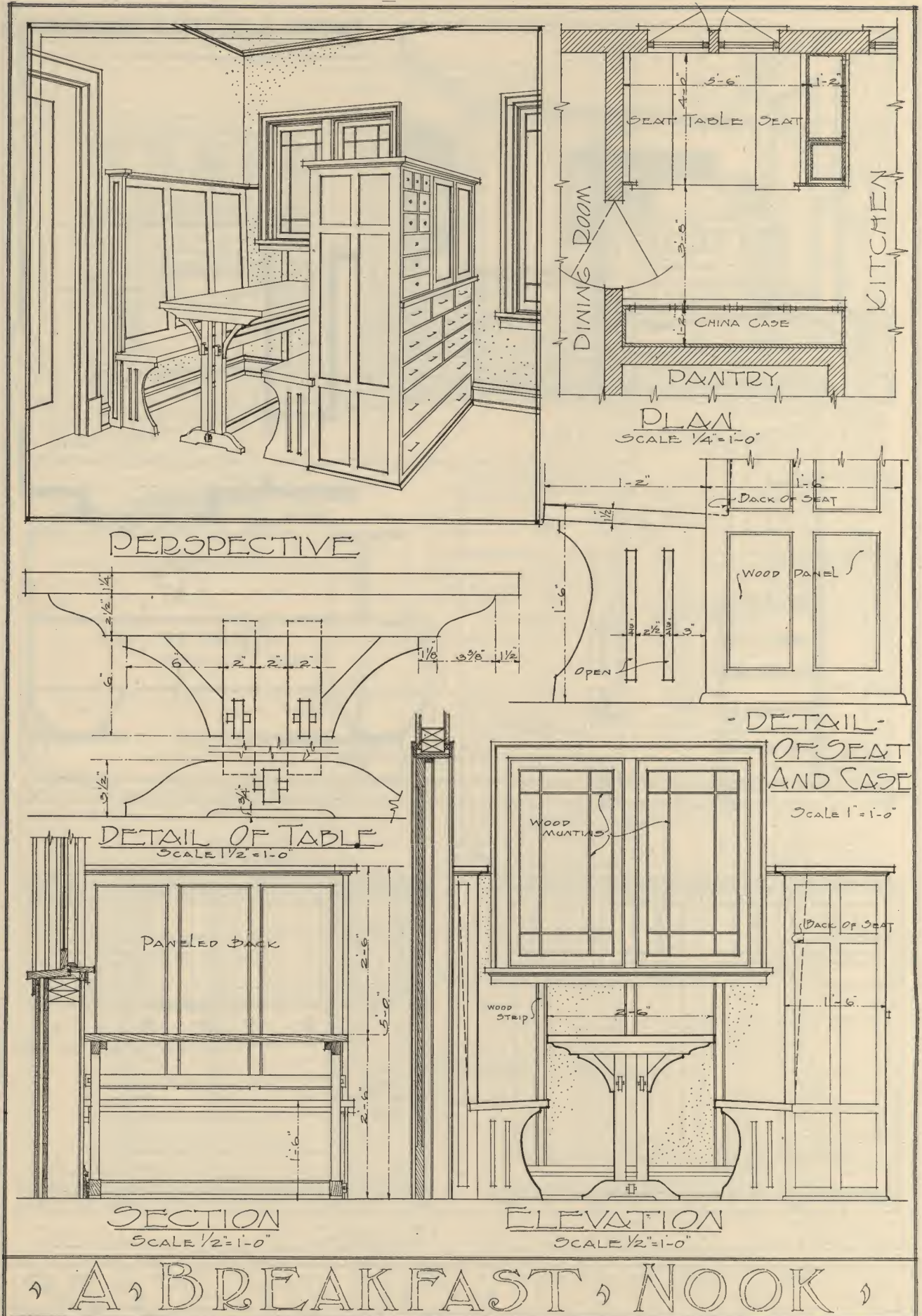


PLAN
SCALE 1/2" = 1'-0"

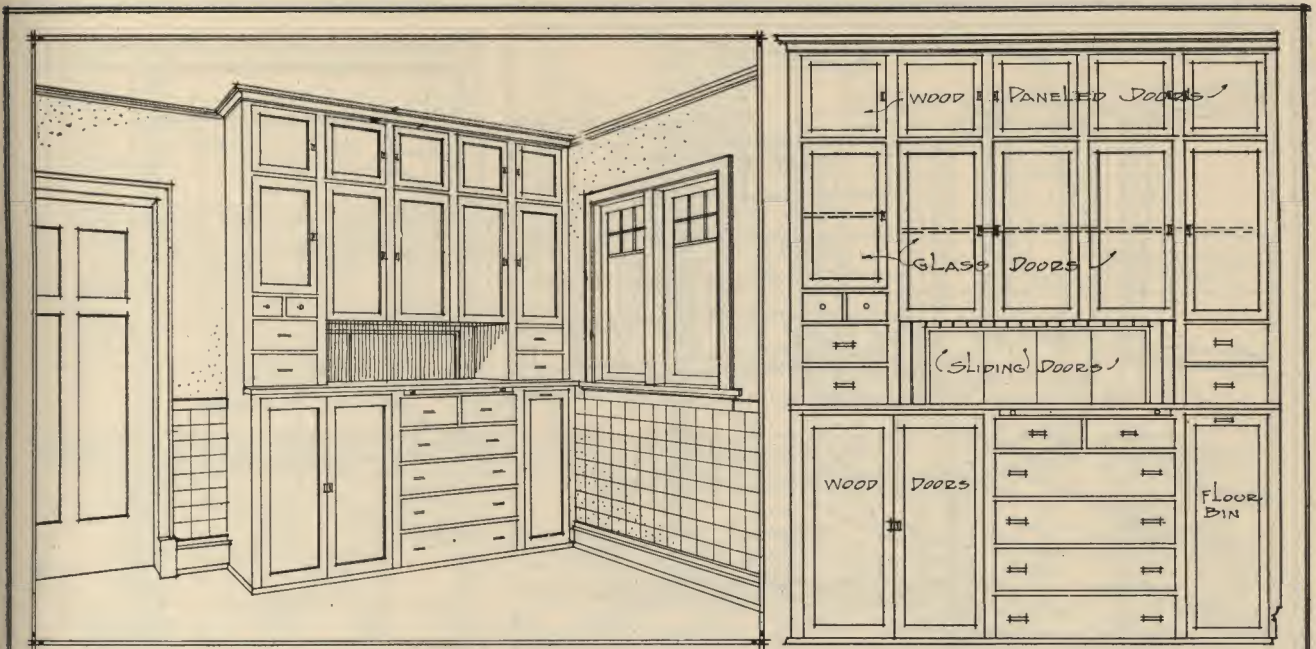


ELEVATION OF BOOK CASE - ELEVATION OF BUFFET
SCALE 1/2" = 1'-0"

A. BUFFET - BOOK CASE

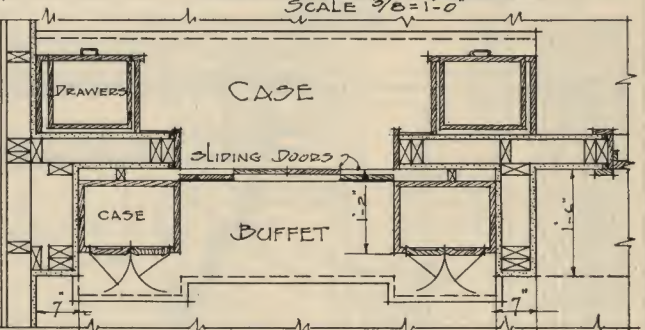
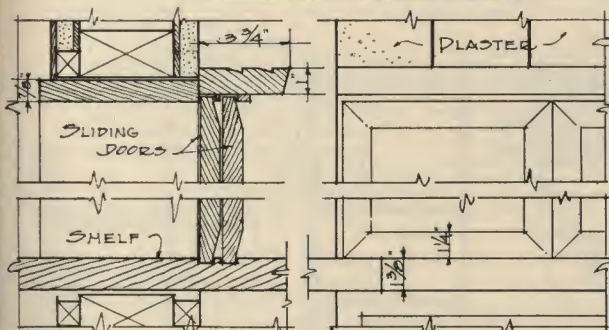


Architect's Drawing Giving Perspective Sketch, Floor Plan and Details of a Very Interesting Breakfast Alcove Formed by Kitchen Cabinet.



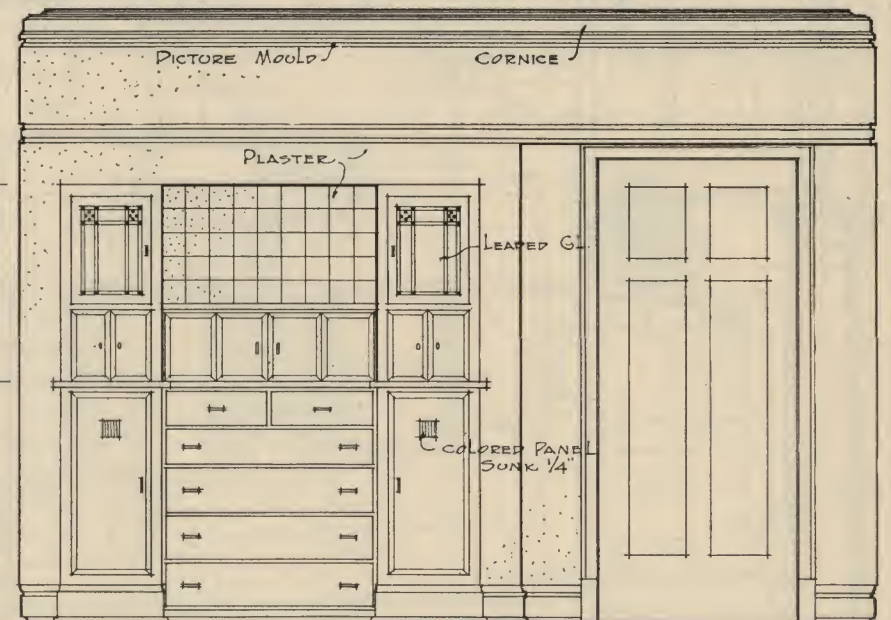
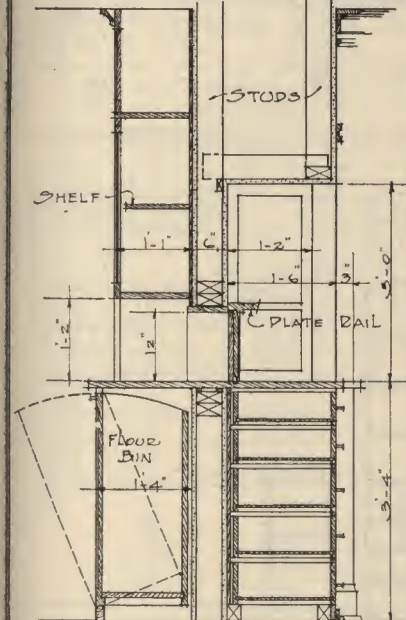
- PERSPECTIVE -

- KITCHEN CASE -



- SECTION - AND - ELEVATION - OF -
- SLIDING - DOORS - SCALE 1/2"=1'-0"

- PLAN -
SCALE 3/8"=1'-0"

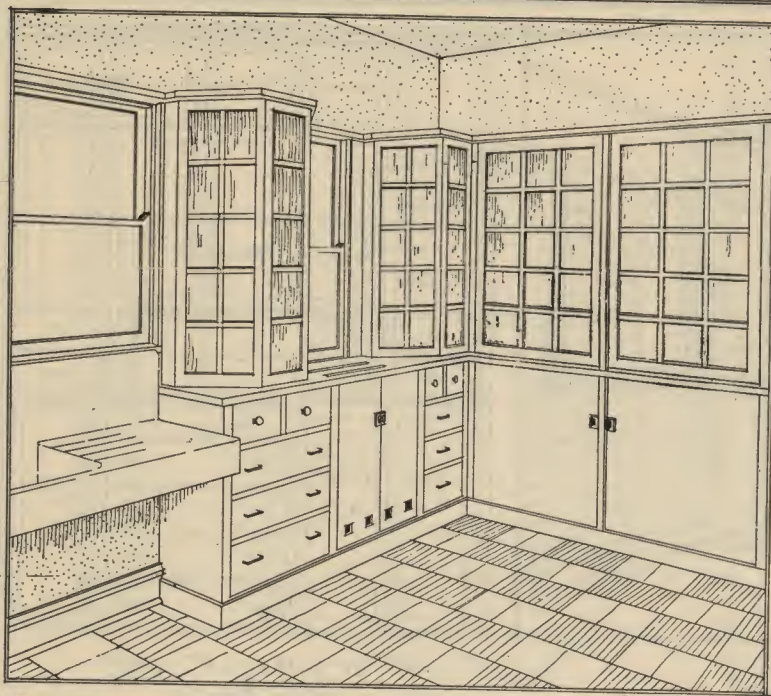


- SECTION -
SCALE 3/8"=1'-0"

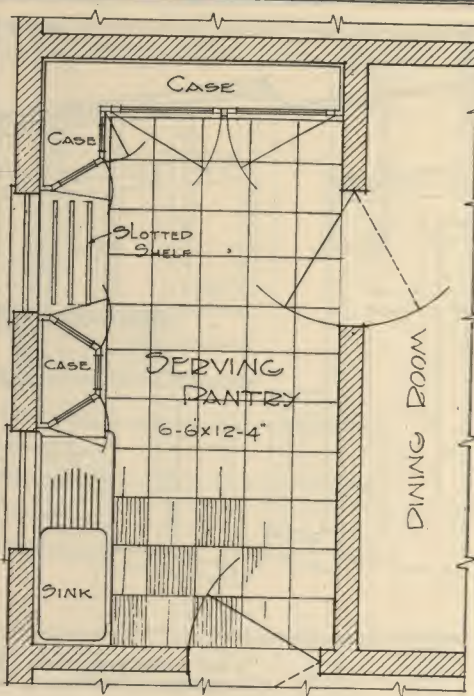
- ELEVATION - OF - BUFFET -
SCALE 3/8"=1'-0"

'A' KITCHEN CASE AND BUFFET

Details of a Commodious Cabinet and Sideboard to Be Built Into the Wall Between the Dining Room and the Kitchen.

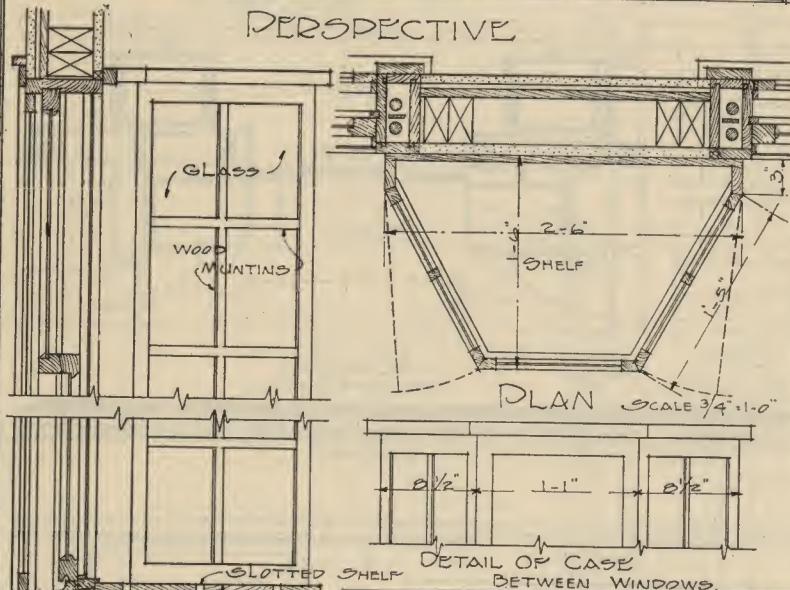


PERSPECTIVE



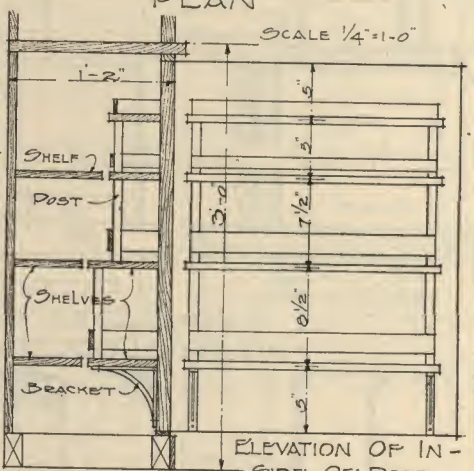
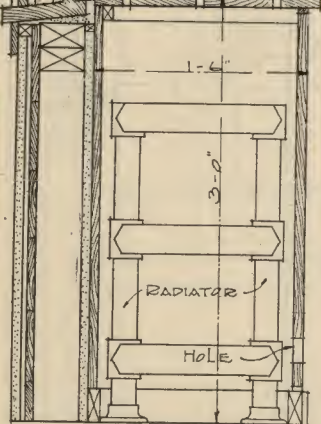
PLAN

SCALE 1/4"=1'-0"

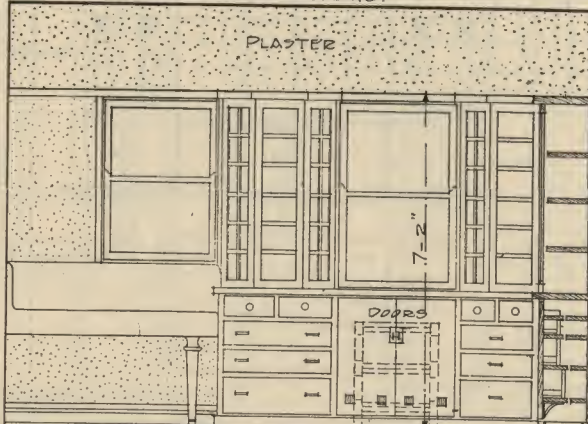


PLAN SCALE 3/4"=1'-0"

DETAIL OF CASE BETWEEN WINDOWS

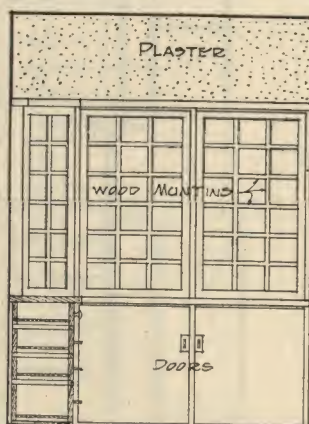
SECTION - THRU - CASE -
SCALE 3/4"=1'-0"

SECTION



ELEVATION

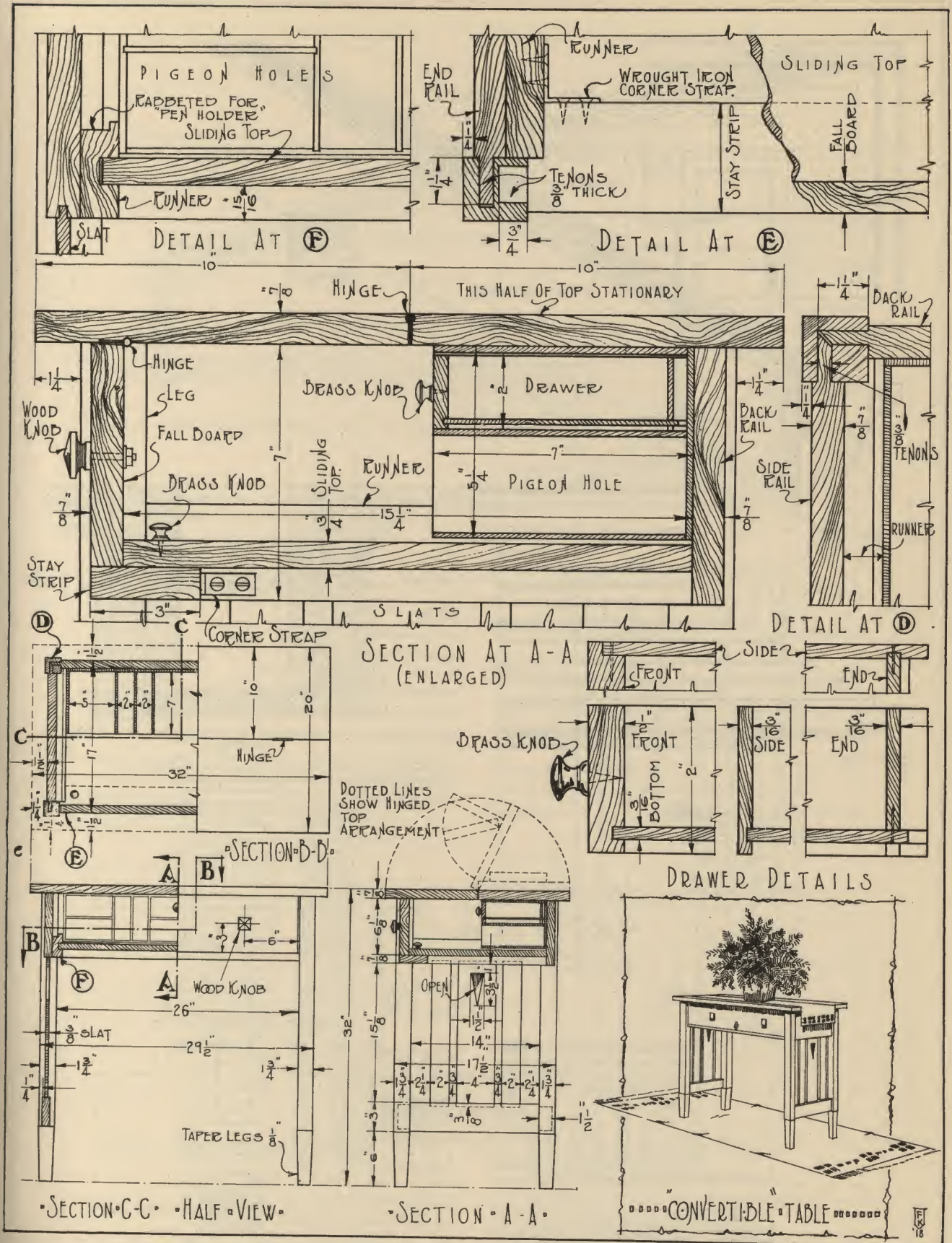
SCALE 1/4"=1'-0"



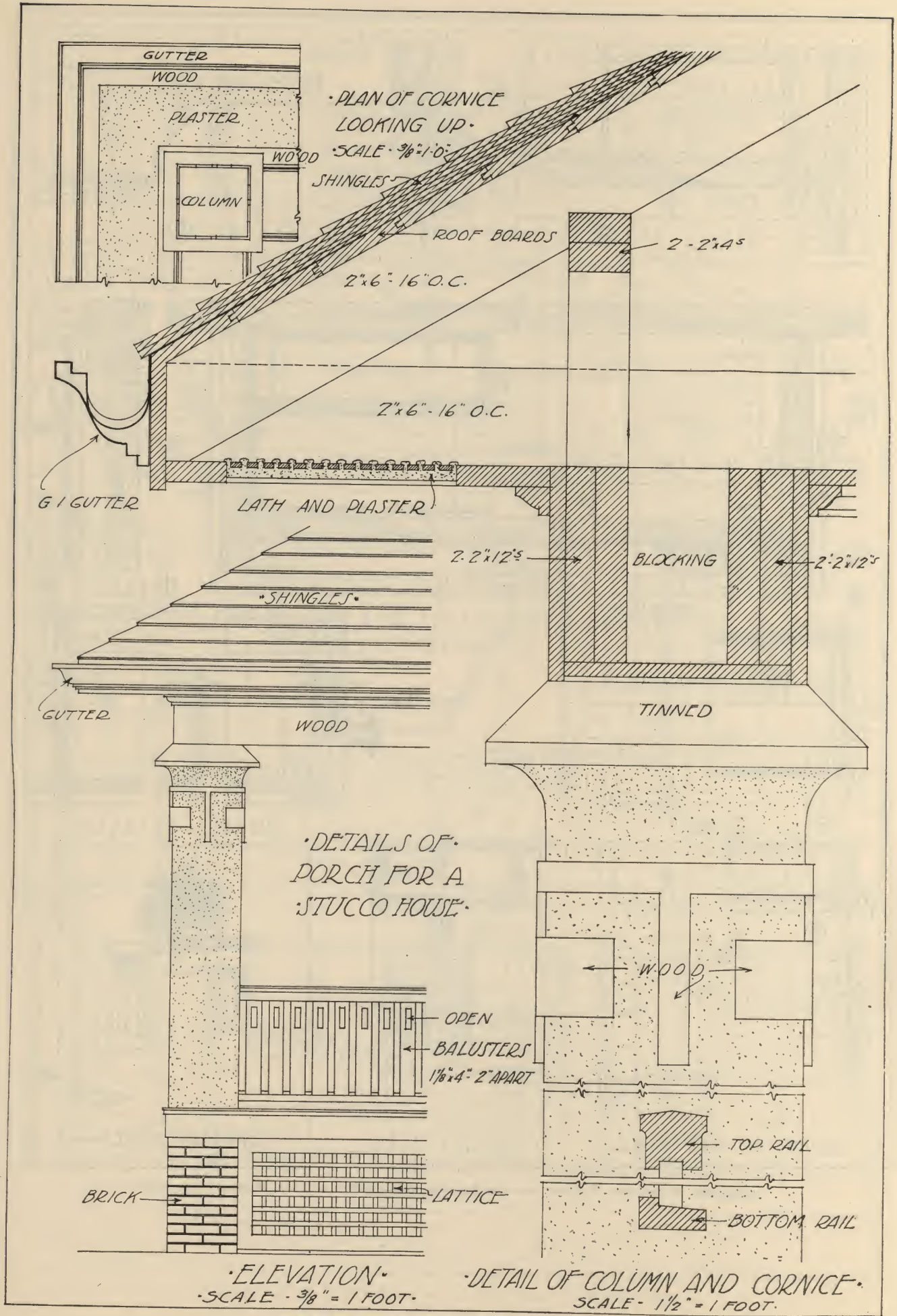
END

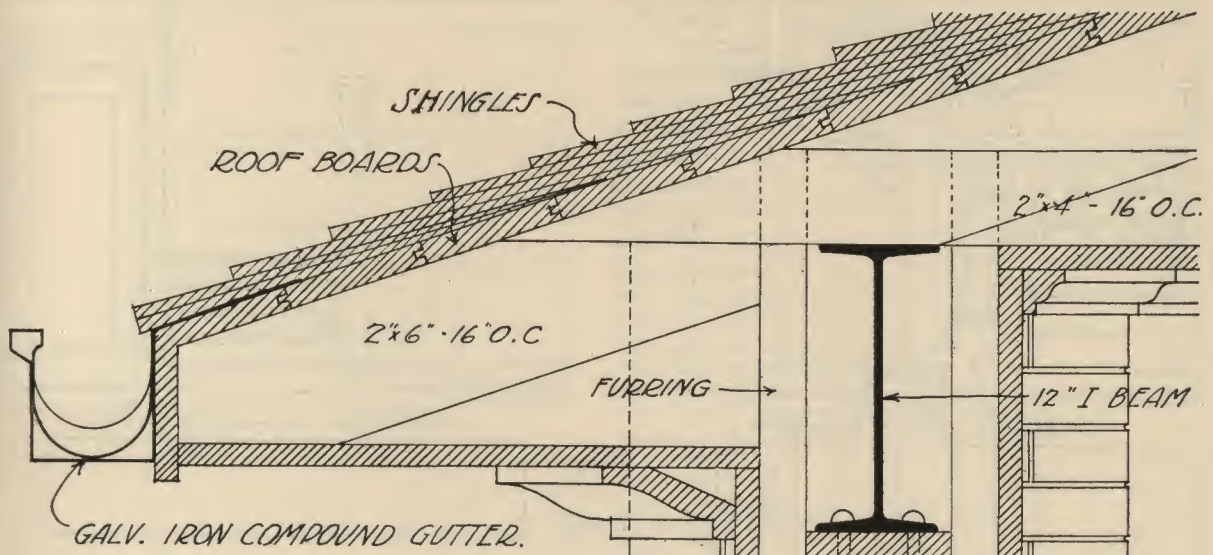
"A SERVING PANTRY"

Perspective Sketch, Plan and Details of a Well Equipped Serving Pantry.

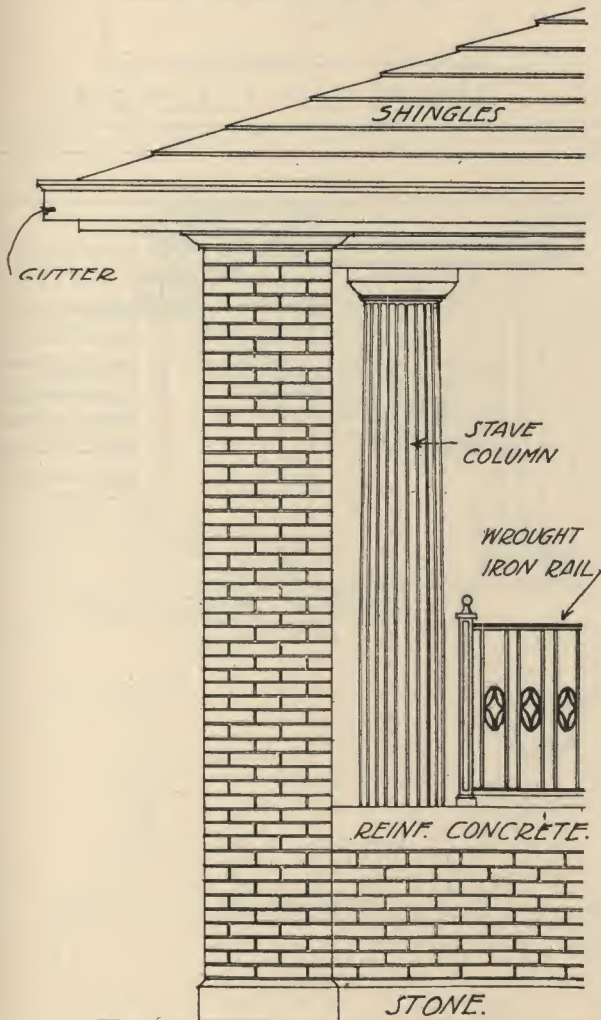


Perspective Sketch and Working Drawing Showing Construction of an Ingenious Table Desk

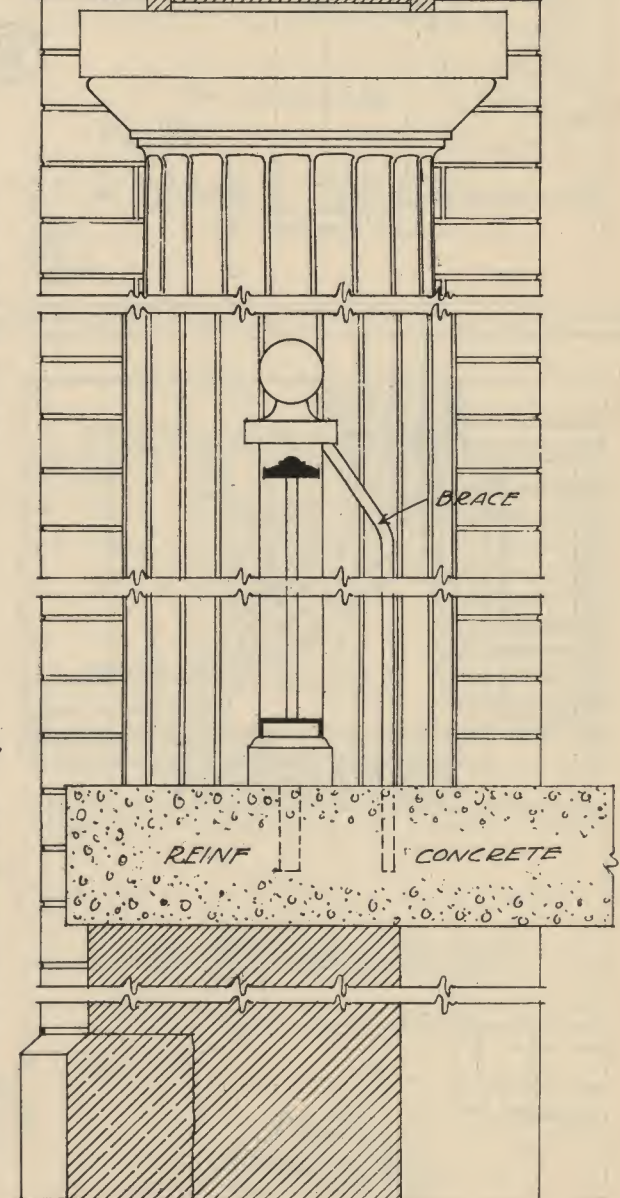




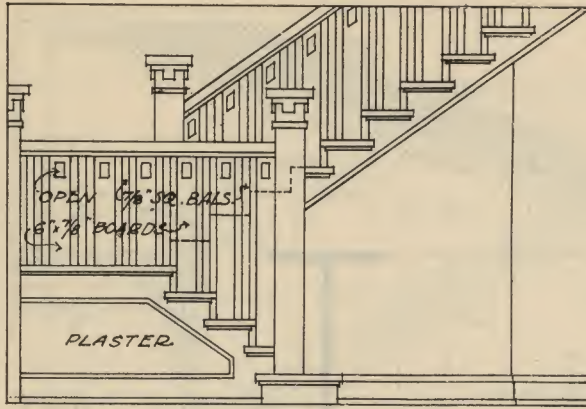
•DETAILS OF•
•PORCH FOR A•
•BRICK HOUSE•



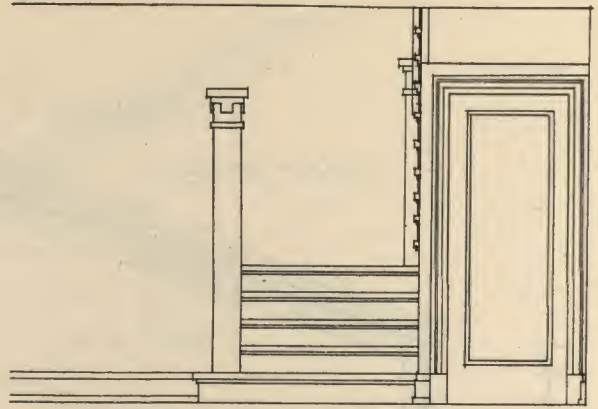
•ELEVATION•
•SCALE - $\frac{3}{8}" = 1 \text{ FOOT}$ •



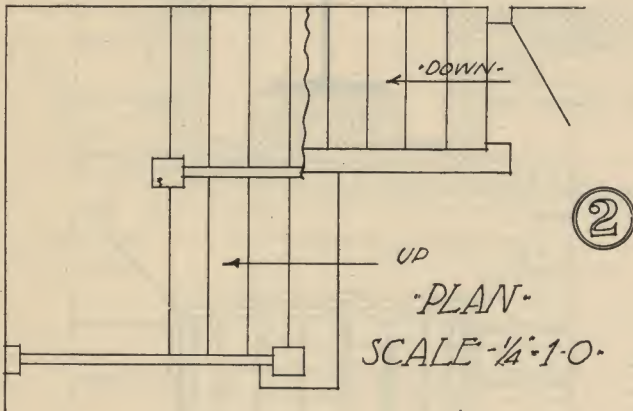
•DETAIL OF COLUMNS AND CORNICE•
•SCALE - $1\frac{1}{2}" = 1 \text{ FOOT}$ •



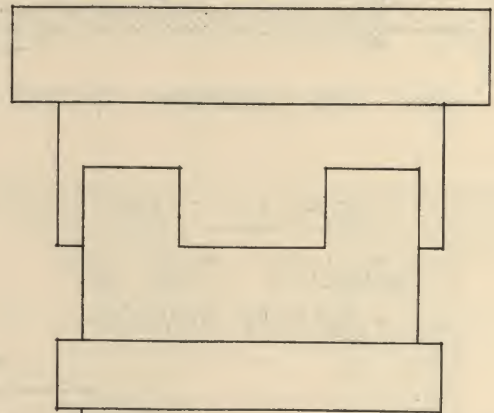
"SIDE ELEVATION"



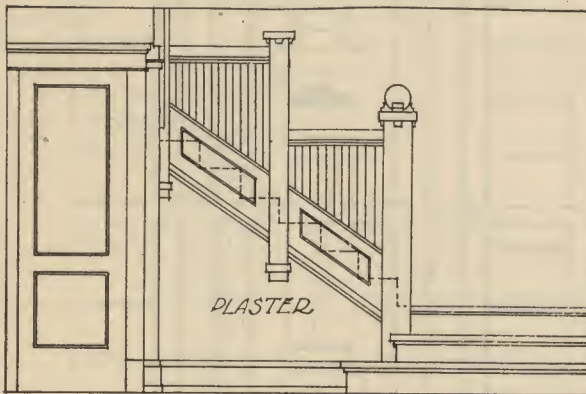
"FRONT ELEVATION"



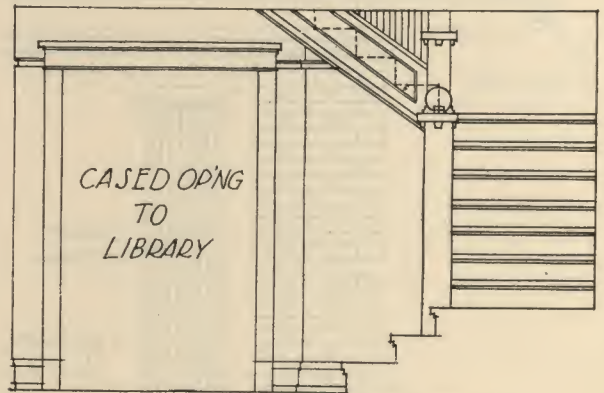
"PLAN"
SCALE - 1/4" = 1'-0"



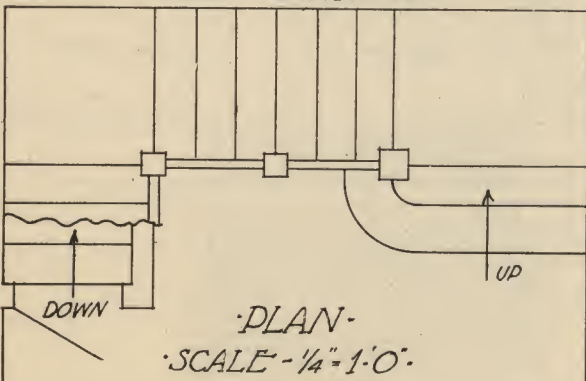
NEWEL CAP - SCALE - 3" = 1'-0"



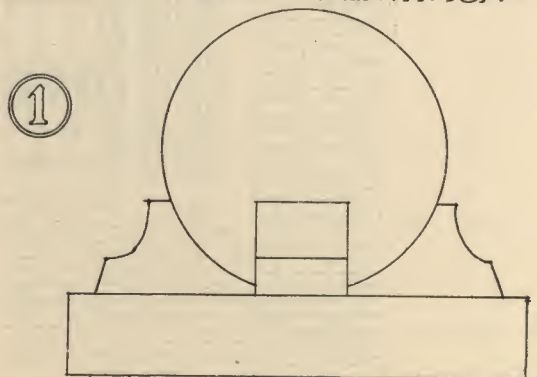
"SIDE ELEVATION"



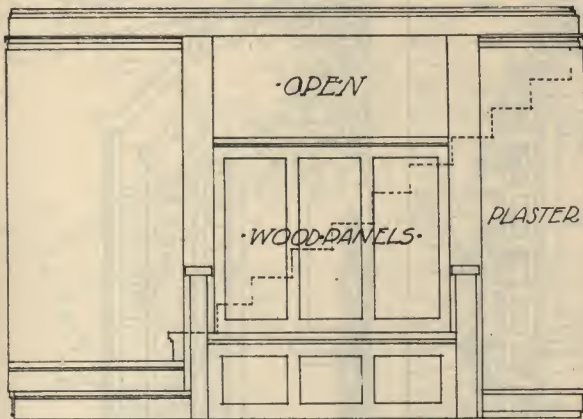
"FRONT ELEVATION"



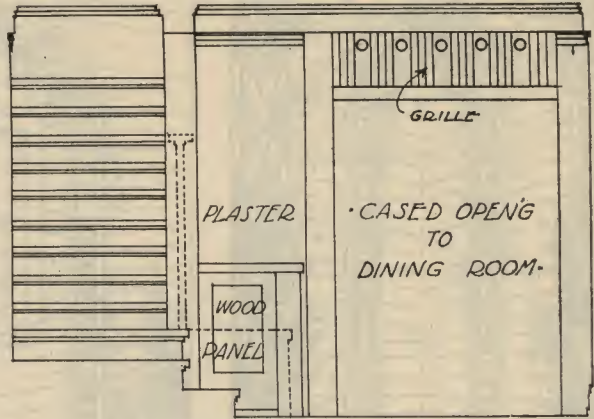
"PLAN"
SCALE - 1/4" = 1'-0"



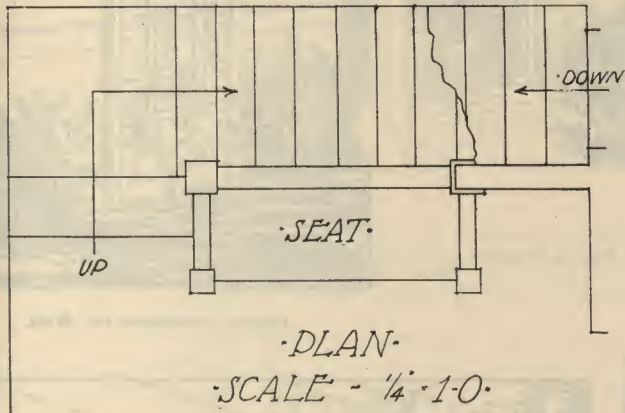
NEWEL CAP - SCALE - 3" = 1'-0"



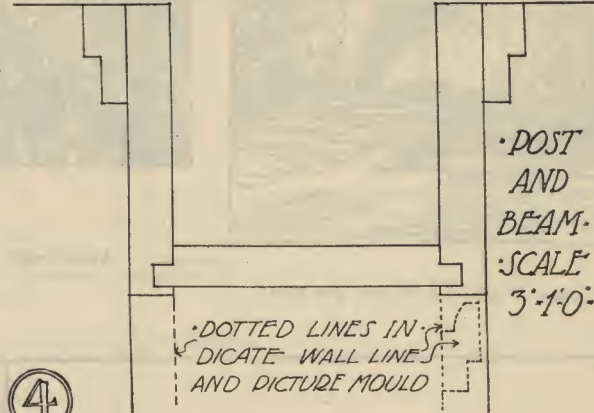
SIDE ELEVATION.



FRONT ELEVATION.



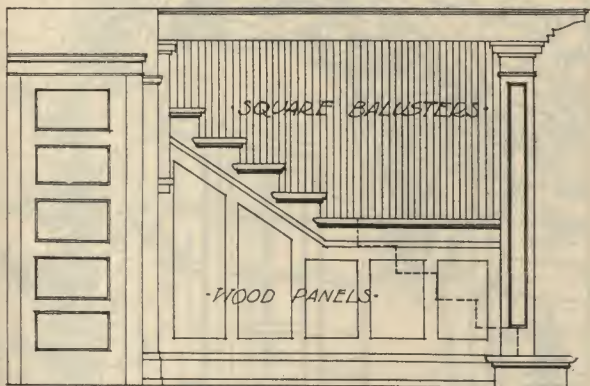
PLAN.
SCALE - 1/4" = 1'-0"



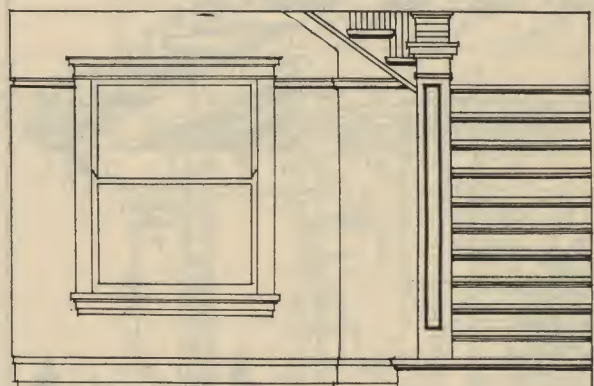
POST
AND
BEAM.
SCALE
3'-10"

DOTTED LINES IN-
DICATE WALL LINE
AND PICTURE MOULD

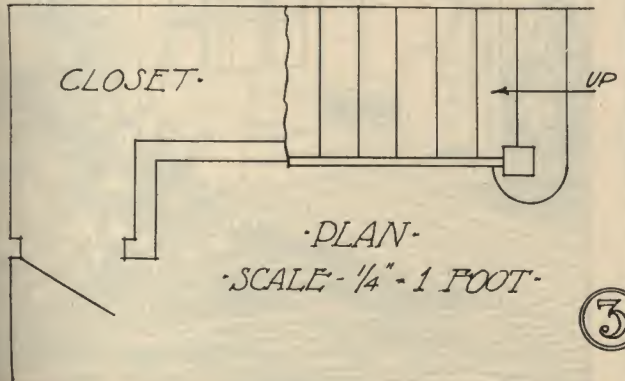
4



SIDE ELEVATION.

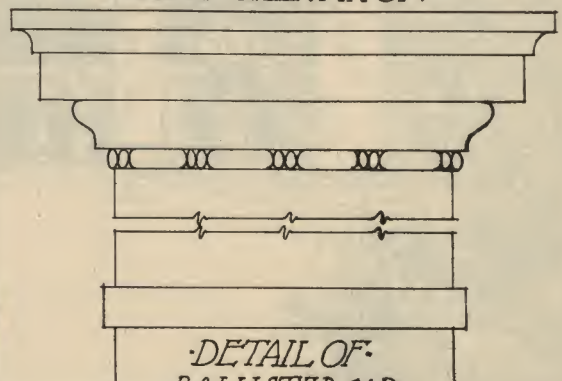


FRONT ELEVATION.

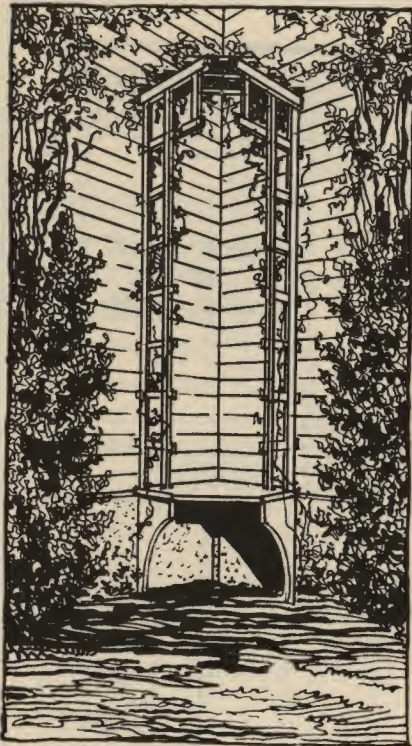


PLAN.
SCALE - 1/4" = 1 FOOT.

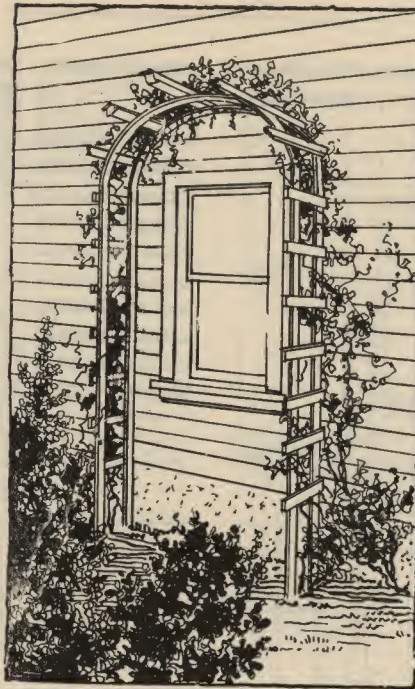
3



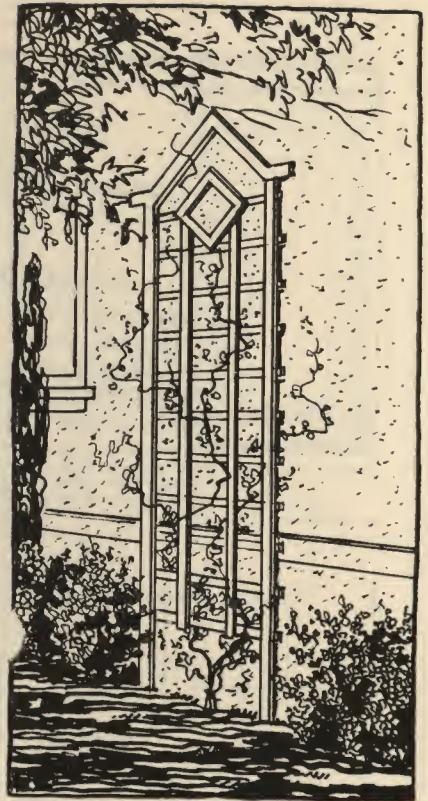
DETAIL OF
BALUSTER CAP.
SCALE - 3'-1 FOOT.



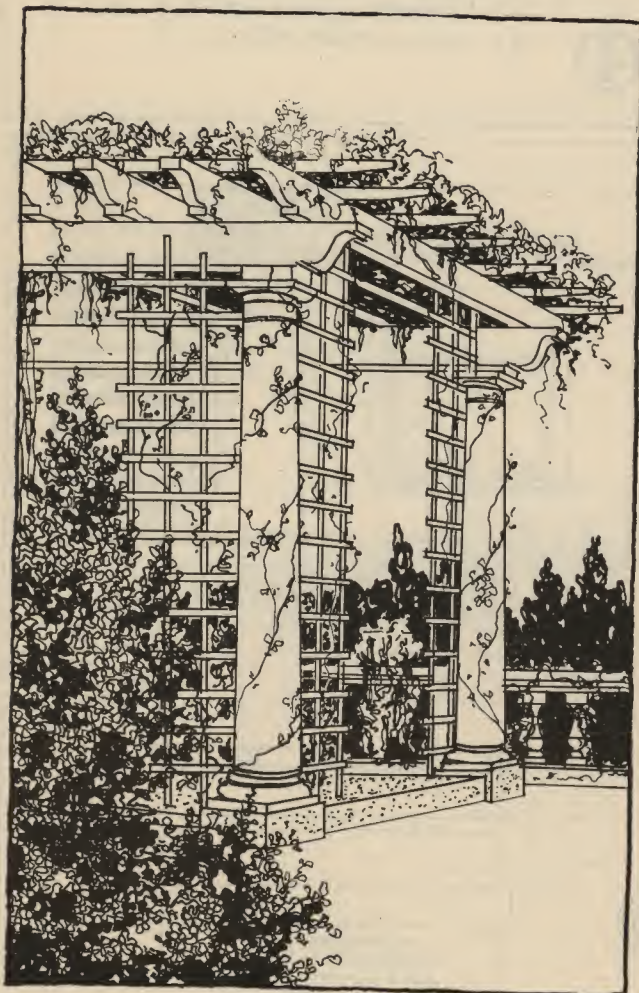
Corner Trellis and Flower Pot Shelf.



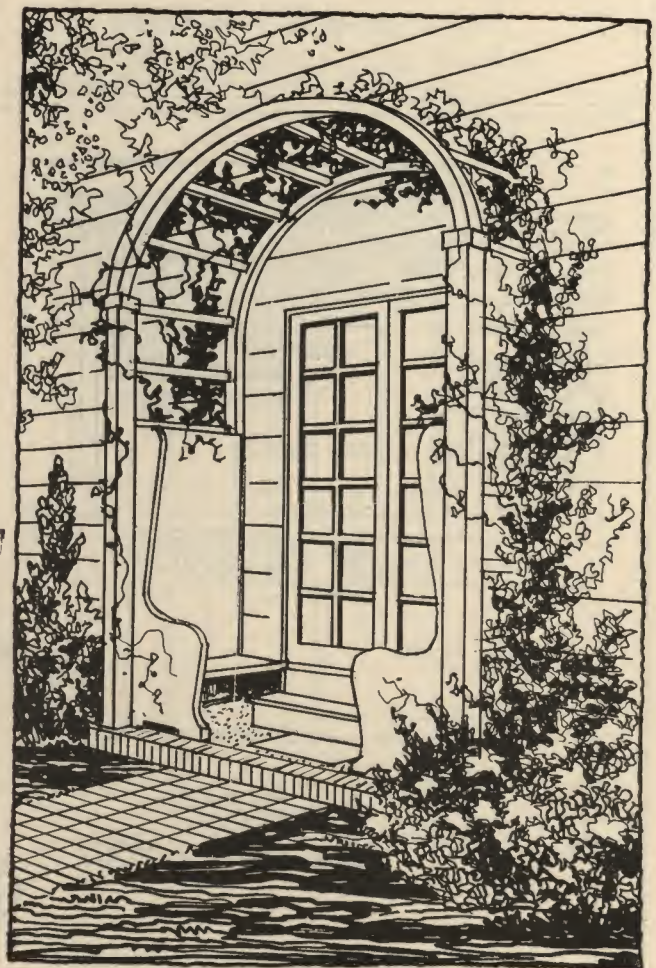
Arch Trellis Over a Window.



Lattice Ornament for Wall.

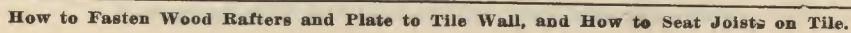


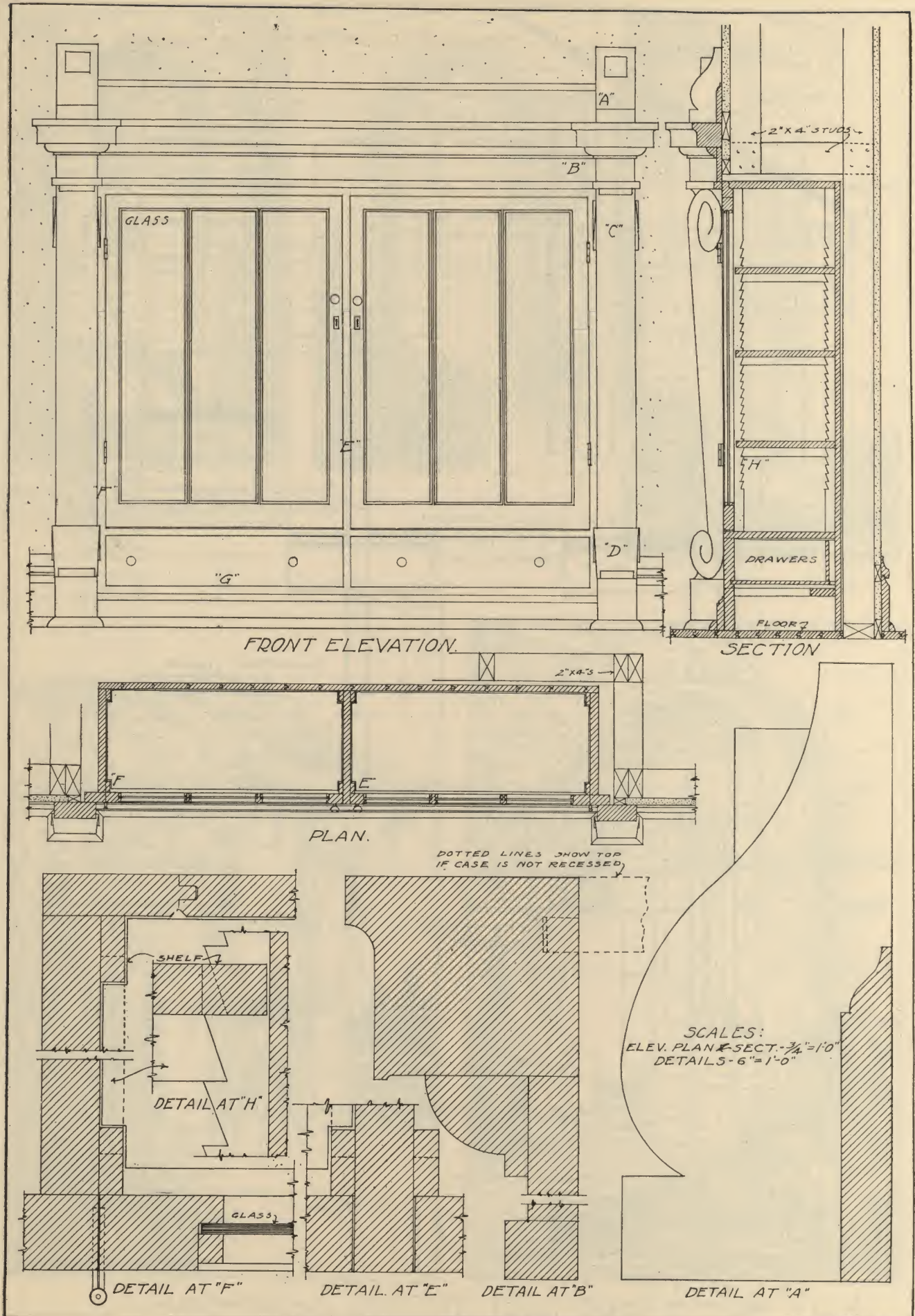
A Pergola Entry.



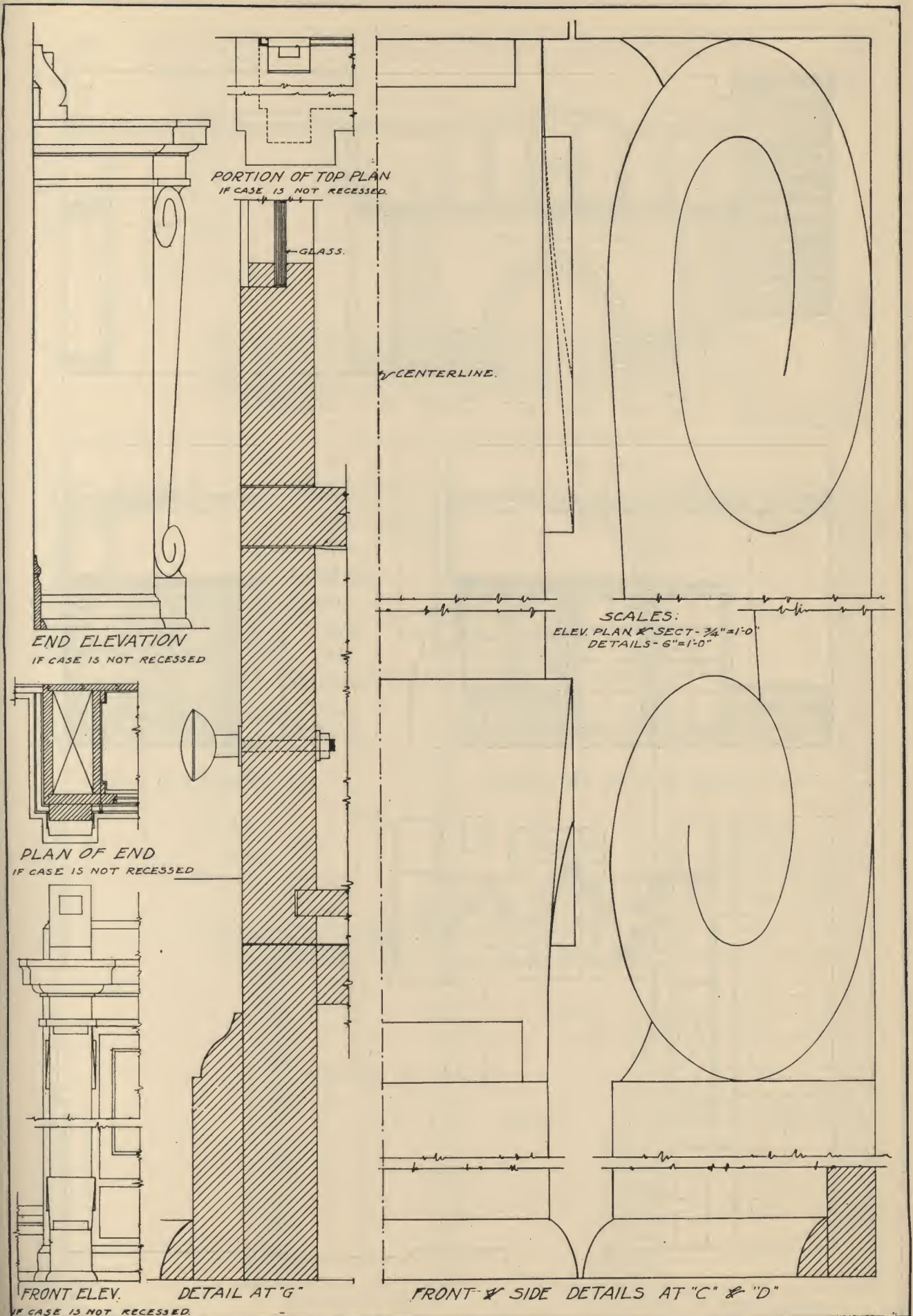
A Trellis and Seat Entry.

VINE TRELLISES AND ORNAMENTAL FEATURES.

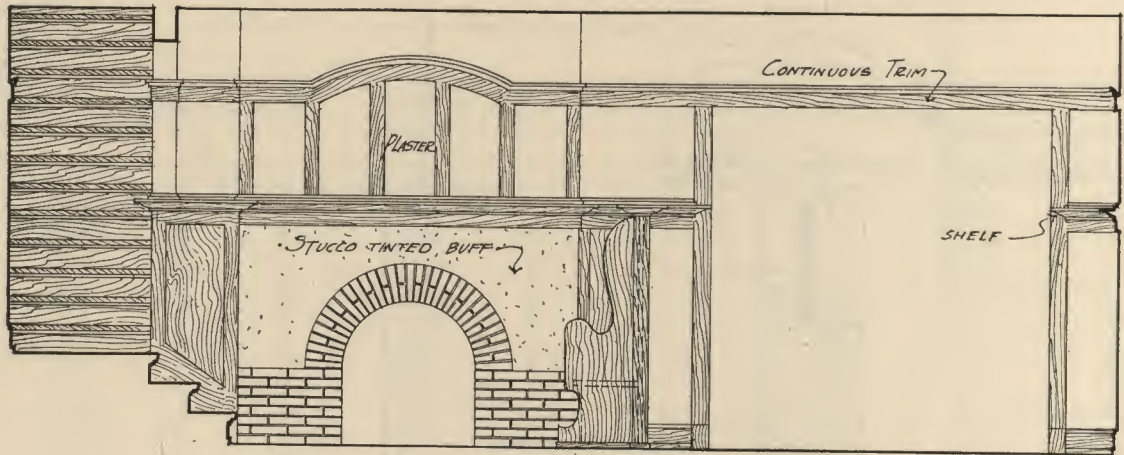




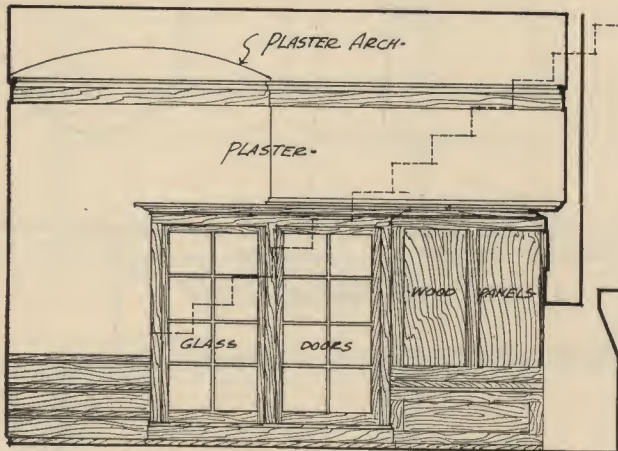
Built-In Colonial Book Case—Recessed (See Opposite Page).



Arrangement of Book Case to Project Into Room (See Opposite Page).

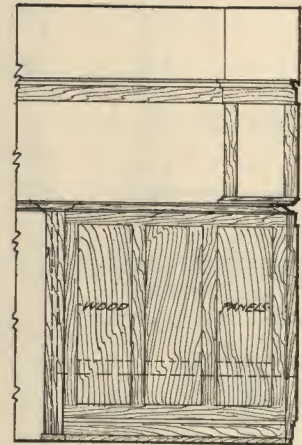


•ELEVATION OF SIDE OF ROOM•

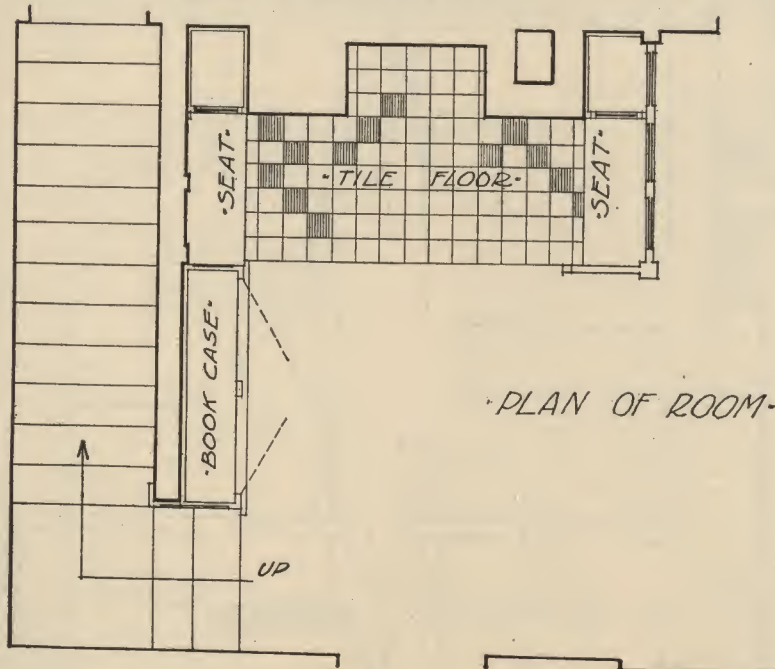


•ELEVATION OF END OF ROOM•

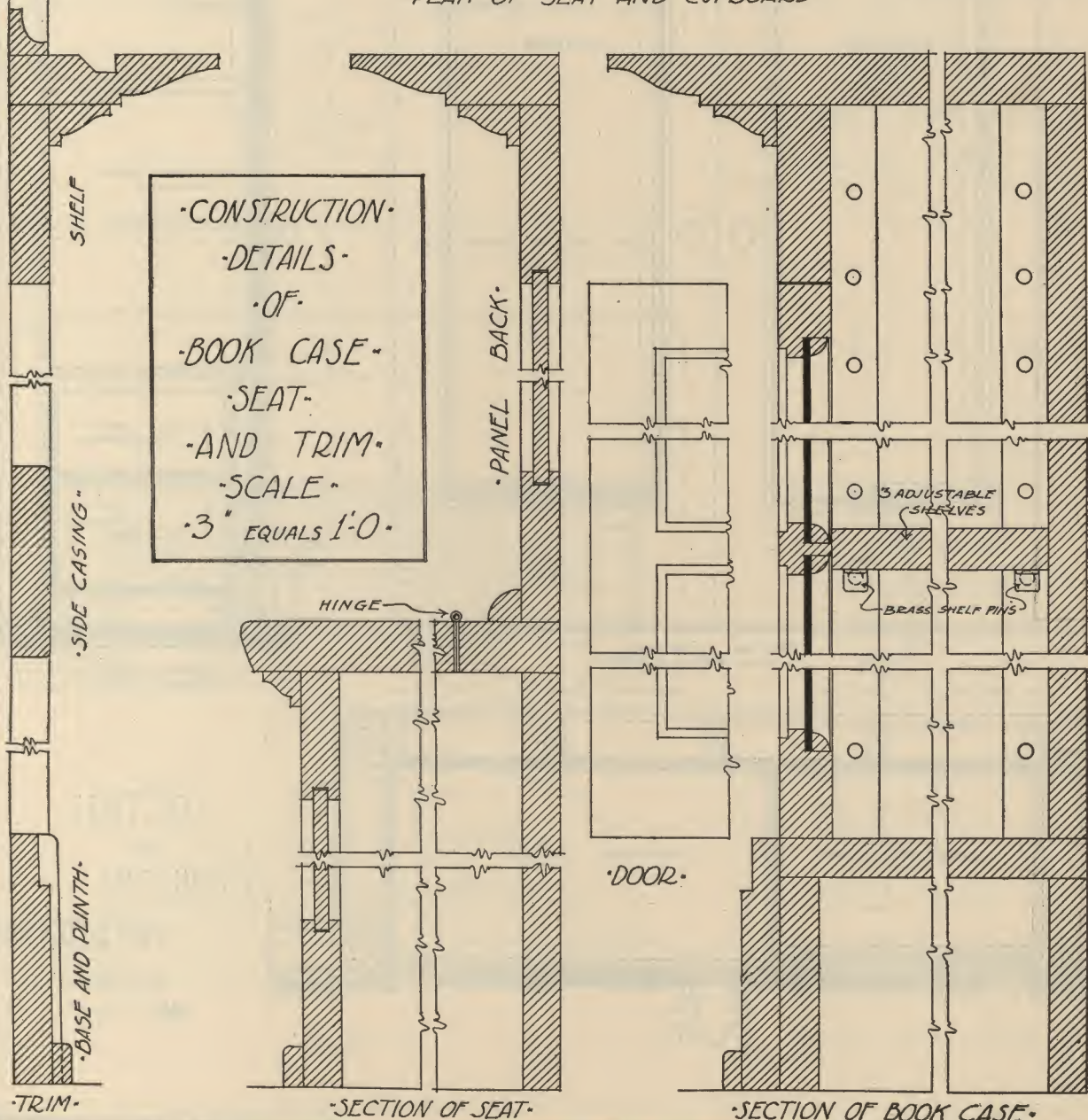
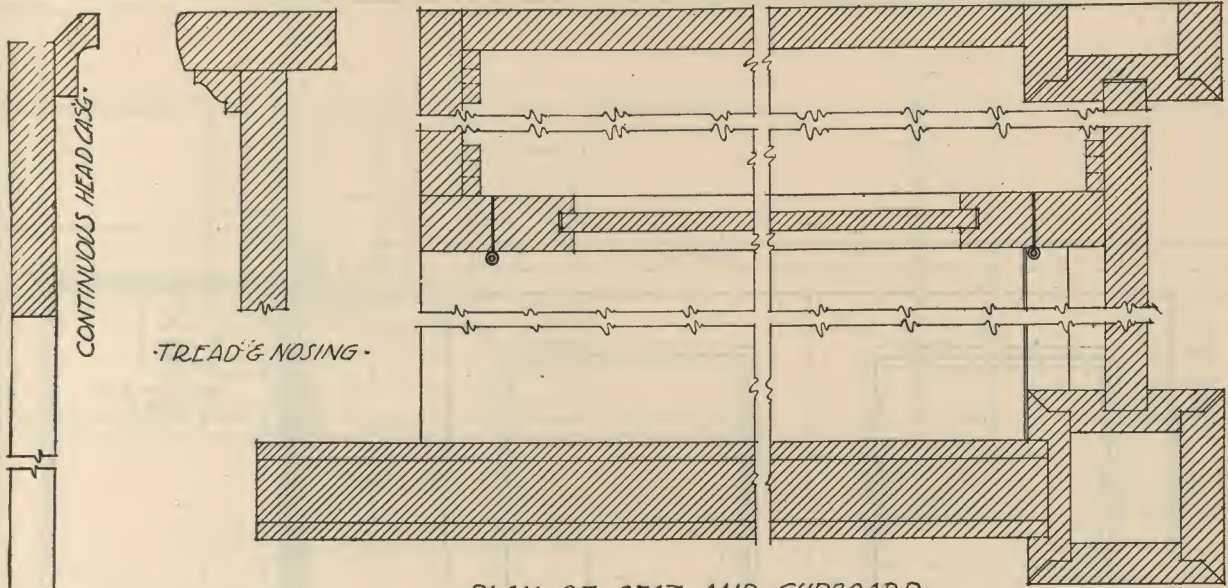
A
LIVING
ROOM
WITH
DETAILS
OF
INGLE
AND
STAIRWAY
SCALE
1/4" = 1'-0"



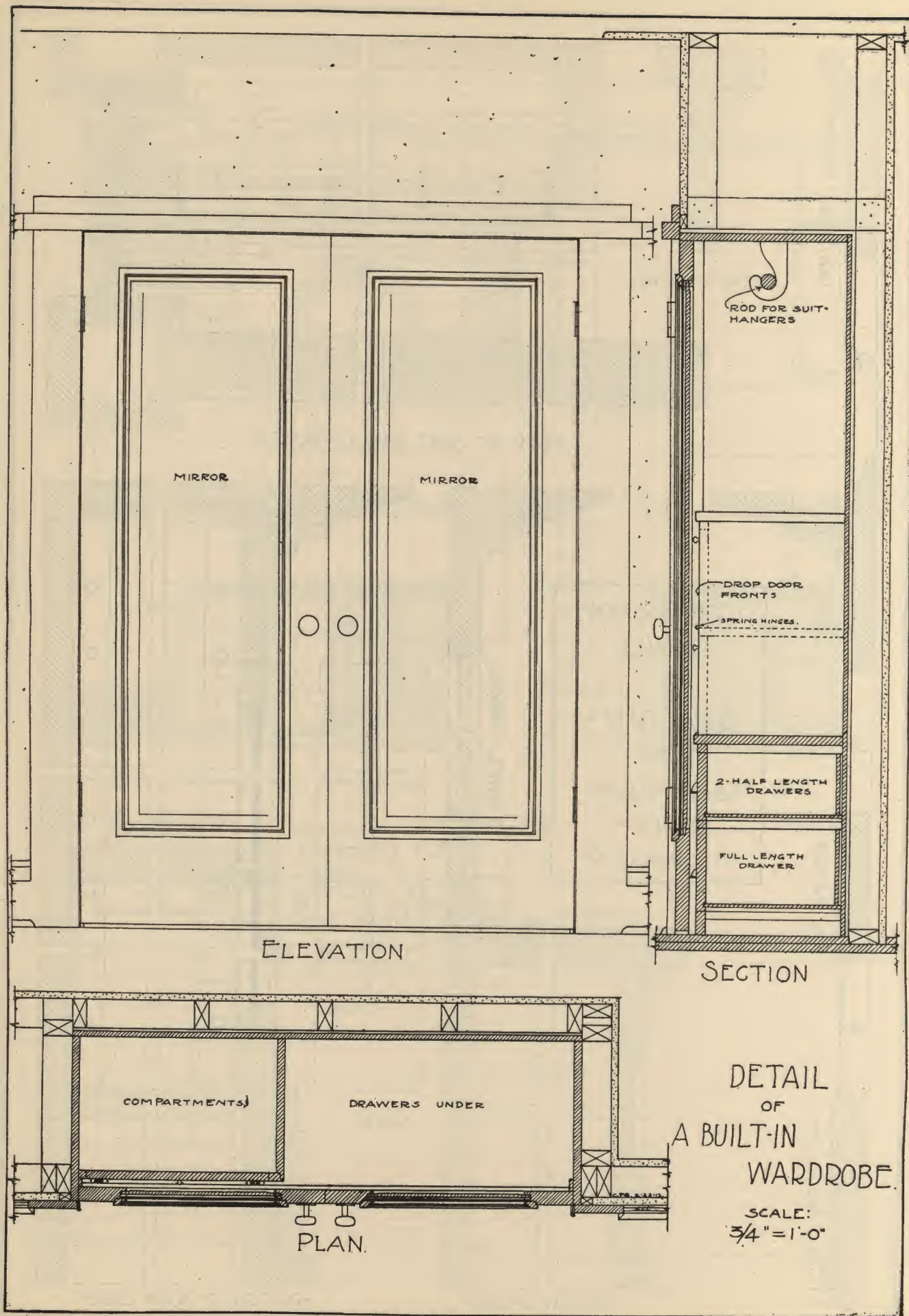
•BACK OF SEAT•



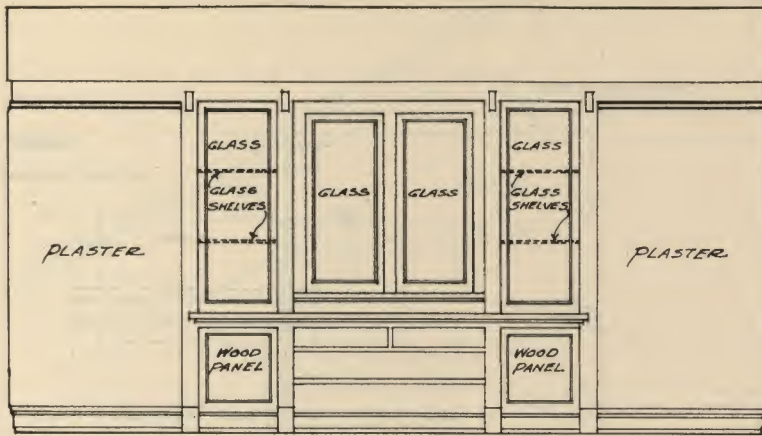
•PLAN OF ROOM•



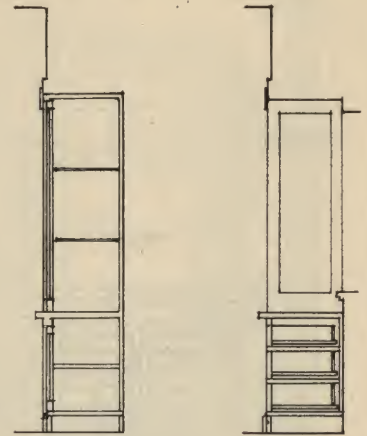
Details of Built-In Case, Seat, Etc., Used in Living Room Design on Opposite Page.



Built-In Wardrobe for Bedroom.

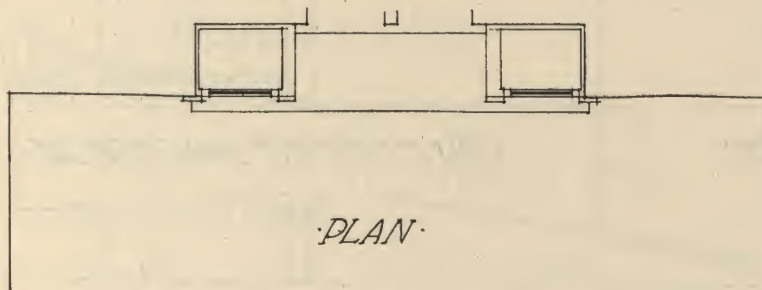


ELEVATION



SECT THRO
CUPBOARDS

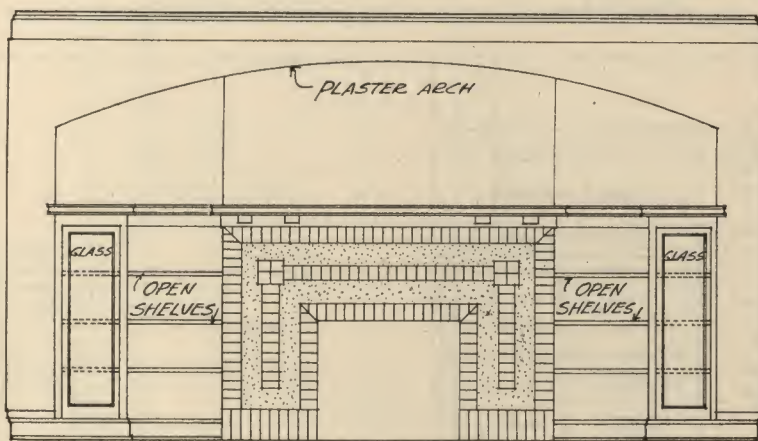
SECT THRO
DRAWERS



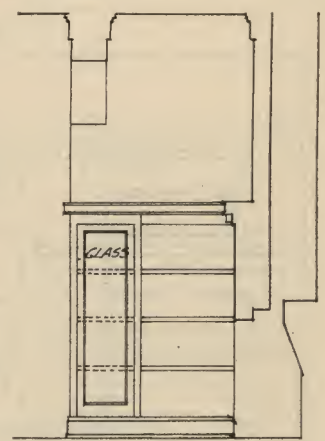
PLAN

A BUFFET
RECESSED
IN A
SMALL BAY
SCALE $\frac{1}{4}'' = 1 \text{ FOOT}$

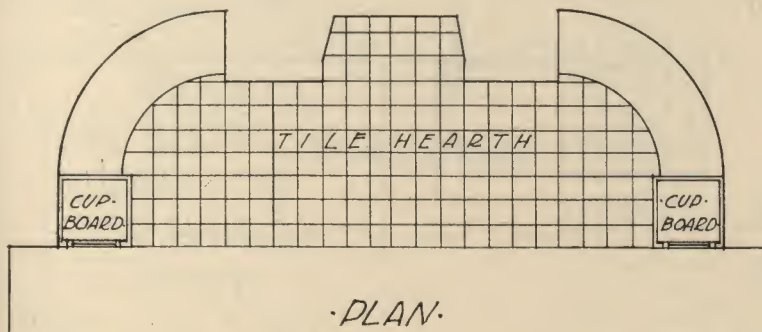
Side Board Set Into Wall.



ELEVATION



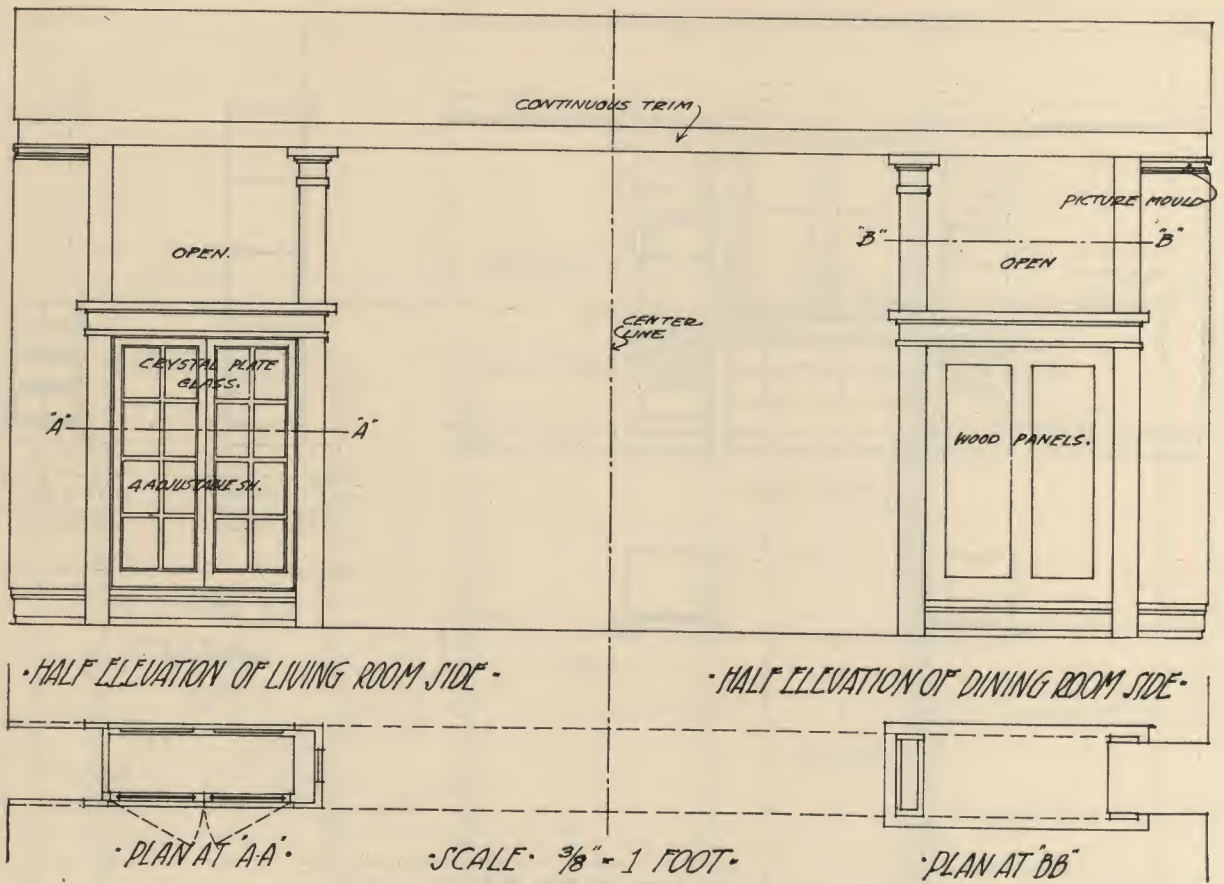
SECTION



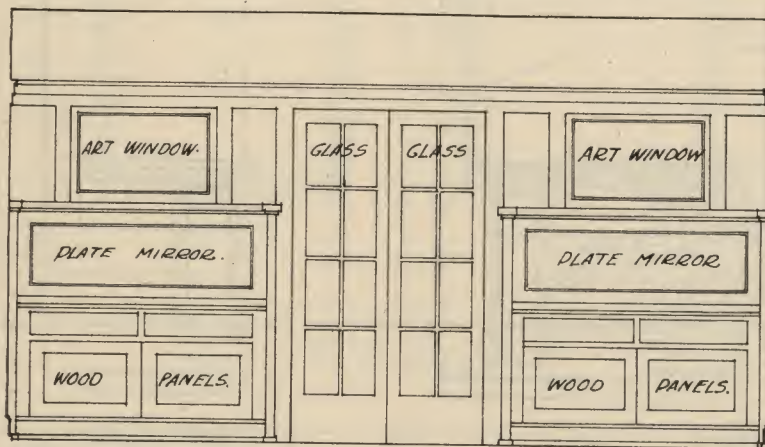
PLAN

TREATMENT
OF AN
INGLE NOOK
IN A
DINING ROOM
SCALE $\frac{1}{4}'' = 1 \text{ FOOT}$

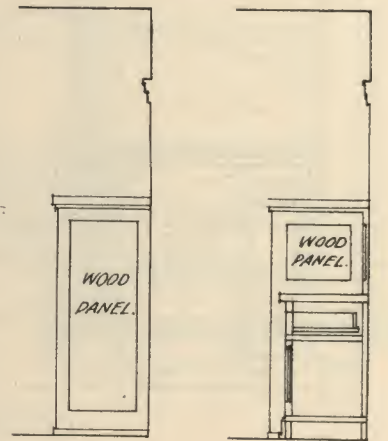
Curved Ingle Nook with Open Shelves.



Scale Drawings of China Closet Colonnade Between Dining and Living Rooms

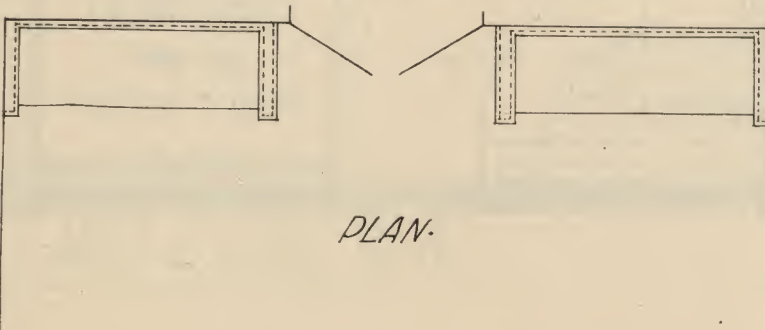


·ELEVATION·

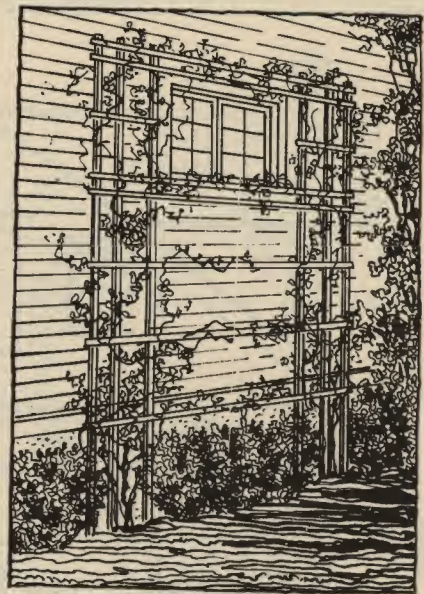
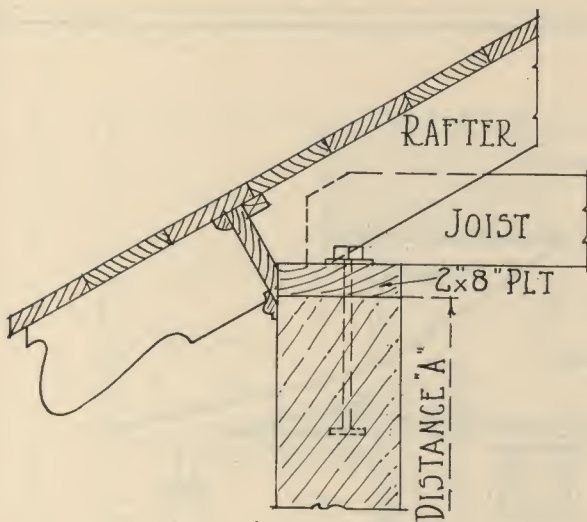


·END·

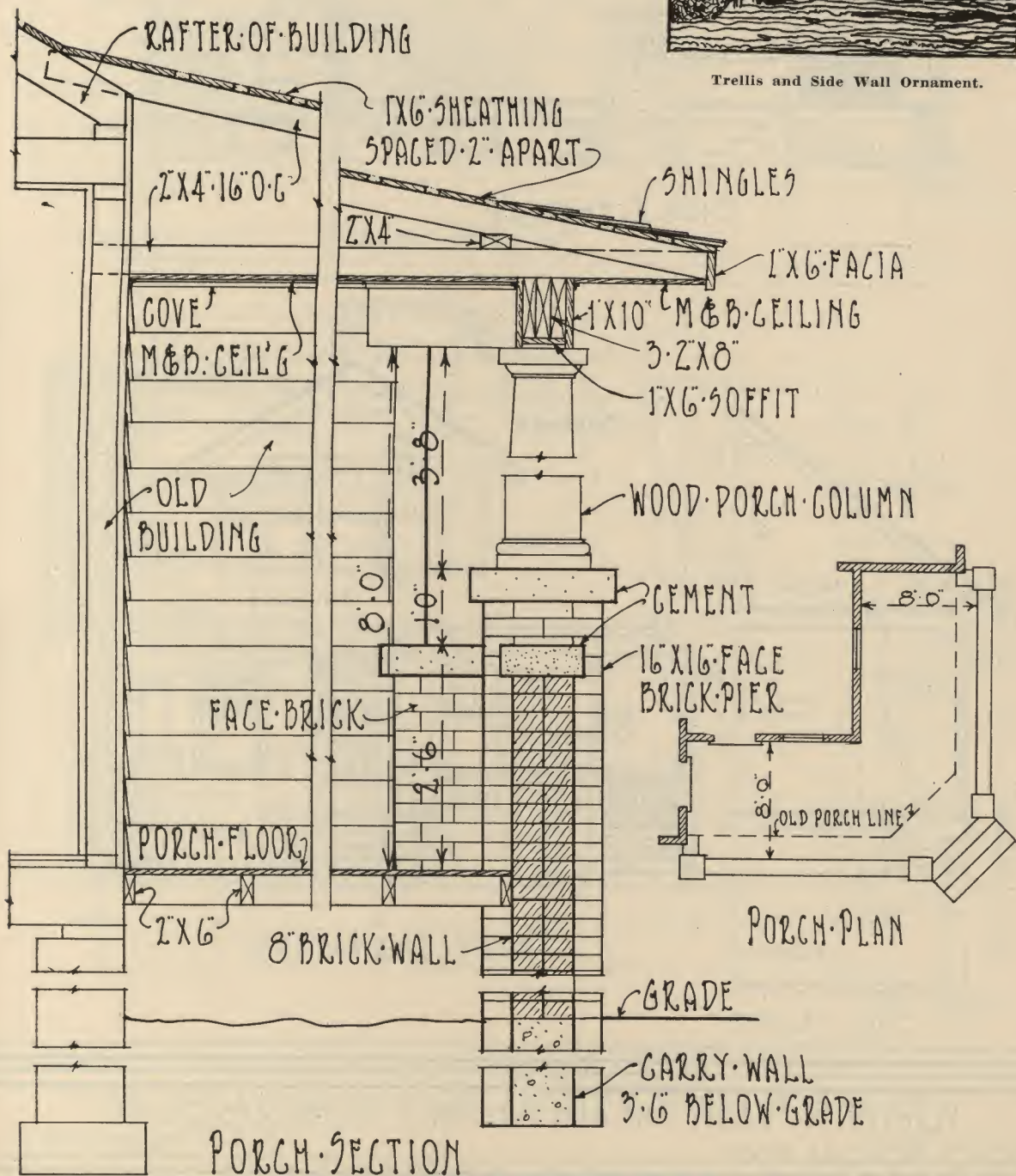
·SECTION·



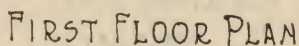
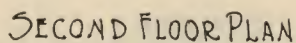
·BUFFET·
 ·ON EITHER SIDE·
 ·OF DOORS·
 ·LEADING TO·
 ·PORCH·
 ·SCALE· $\frac{1}{4}$ " = 1 FOOT·



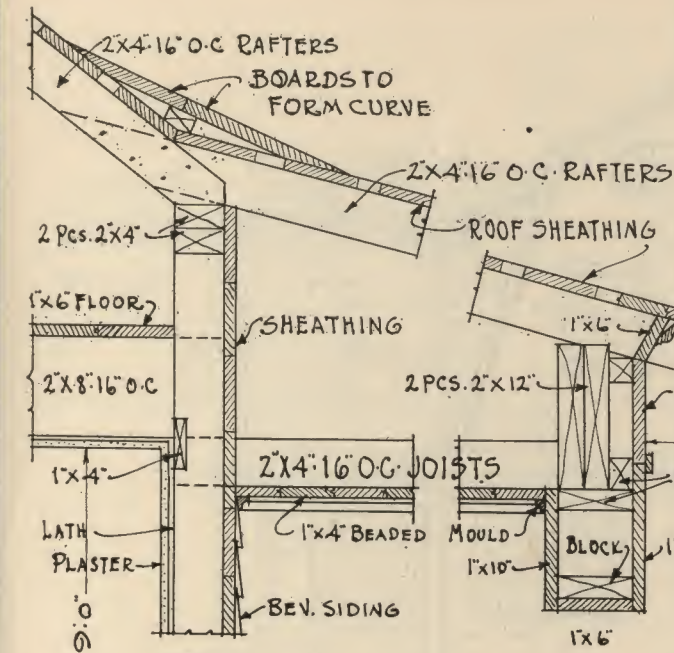
Trellis and Side Wall Ornament.



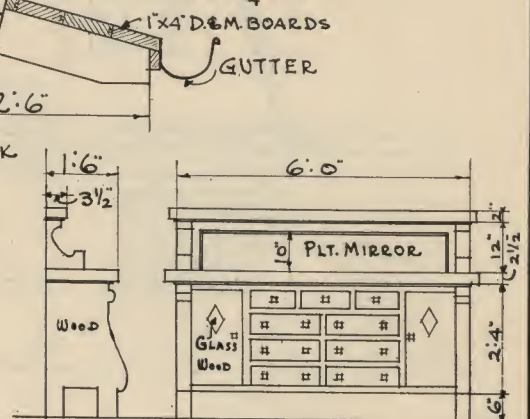
How to Build on a New Brick Porch, Showing Details of a Modernized Porch Suggested as a Substitute for the Old Porch.



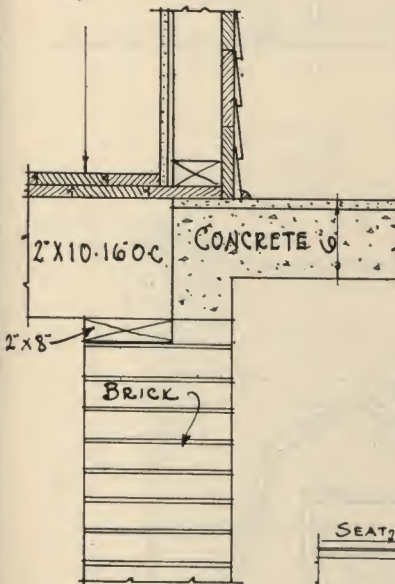
SHEET NO. 2.



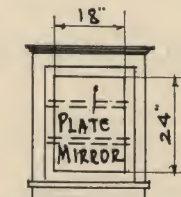
BOOK CASE IN LIVING ROOM
Scale: 1/4" = 1'-0"



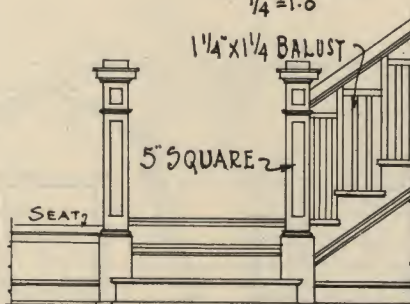
END BUFFET
Scale: 1/4" = 1'-0"



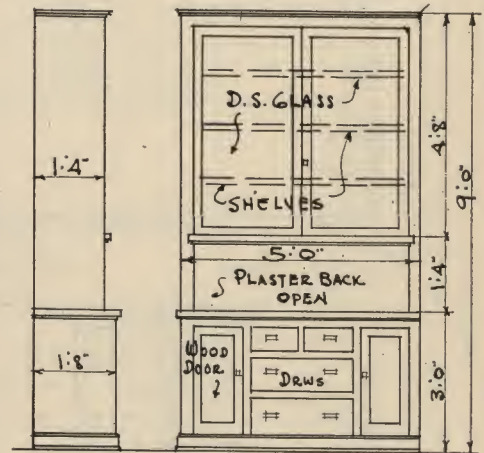
SECTION THRU WALL & PORCH BOX
Scale 3/4" = 1'-0"



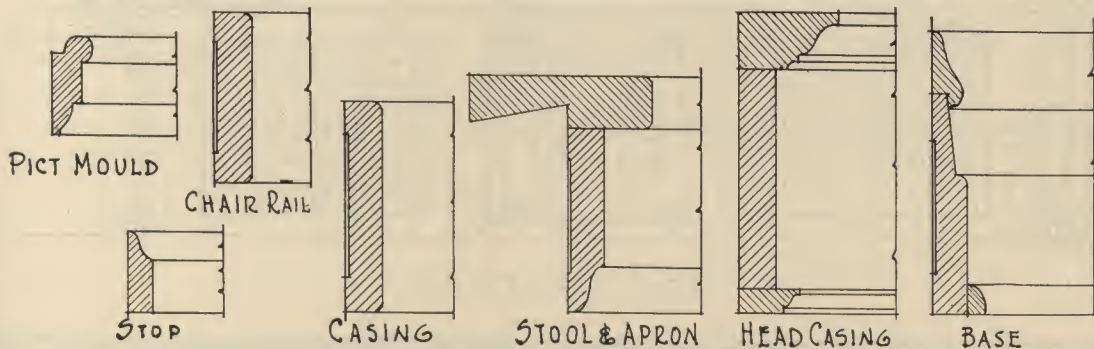
MEDICINE CASE
1/4" = 1'-0"



STAIR DETAIL
1/4" = 1'-0"

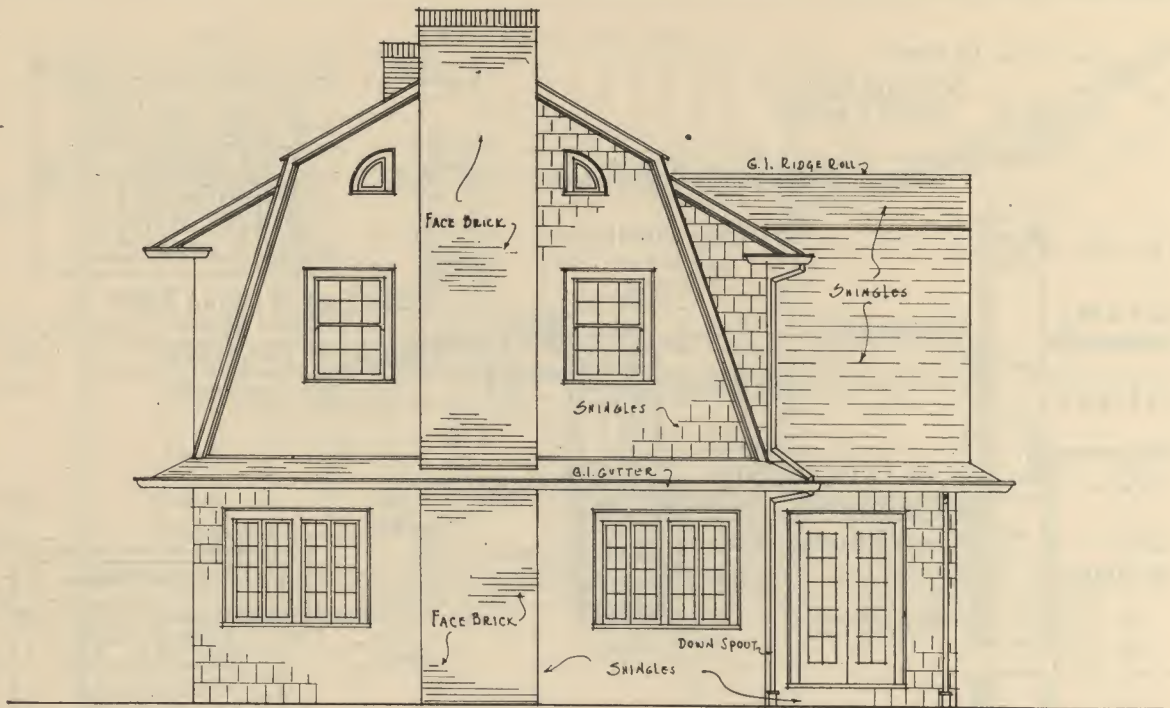


KITCHEN CASE
1/4" = 1'-0"

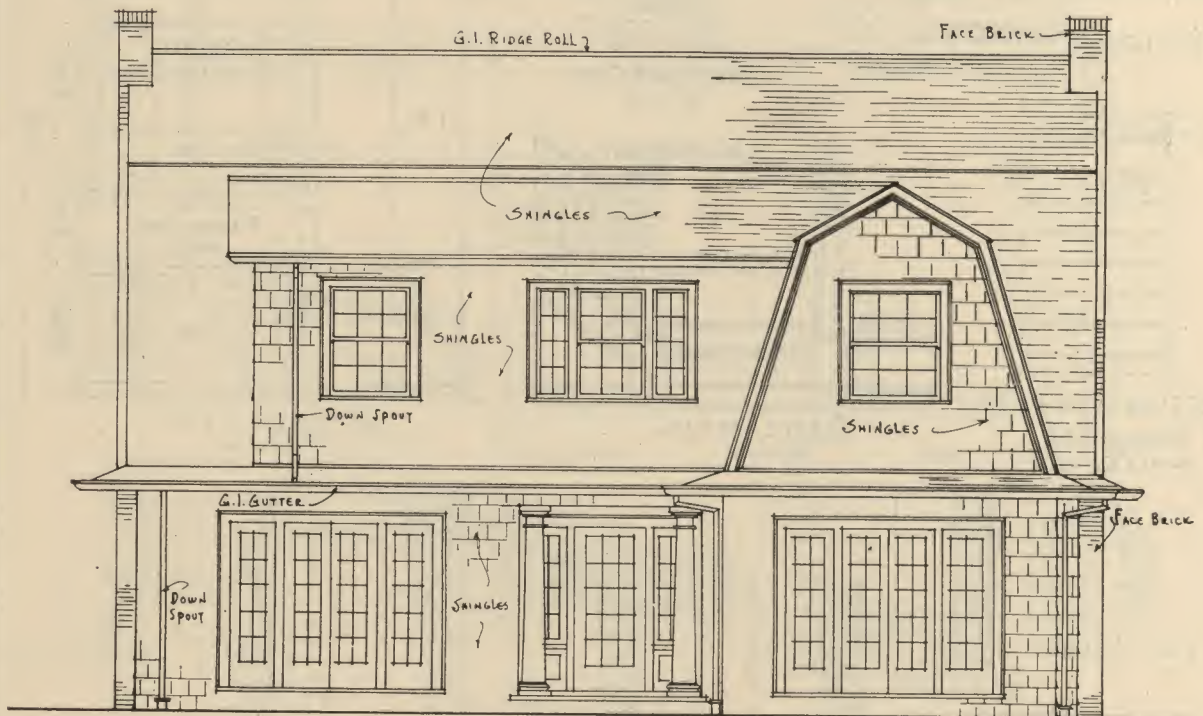


SCALE 1/4" FULL SIZE

PLANS OF SIX ROOM ONE AND ONE HALF STORY RESIDENCE
SCALE AS NOTED ABOVE
SHEET NO 4

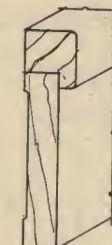
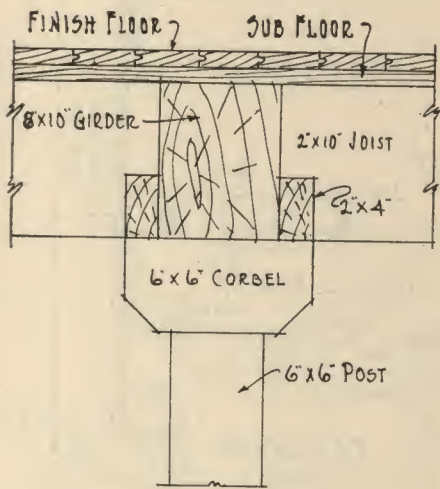


LEFT SIDE ELEVATION

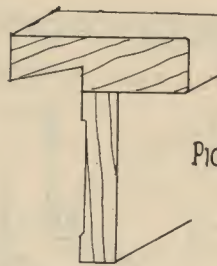


FRONT ELEVATION

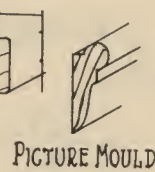
PLANS OF A TWO STORY EIGHT ROOM RESIDENCE
 SCALE $\frac{1}{8}" = 1'-0"$ SHEET No 1.



CASING



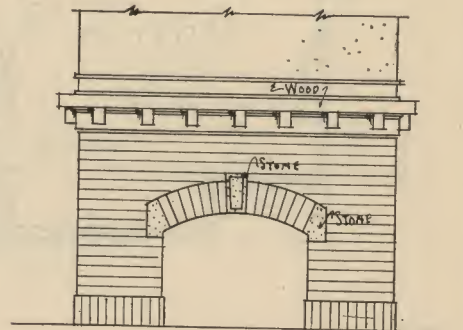
STOOL & APRON



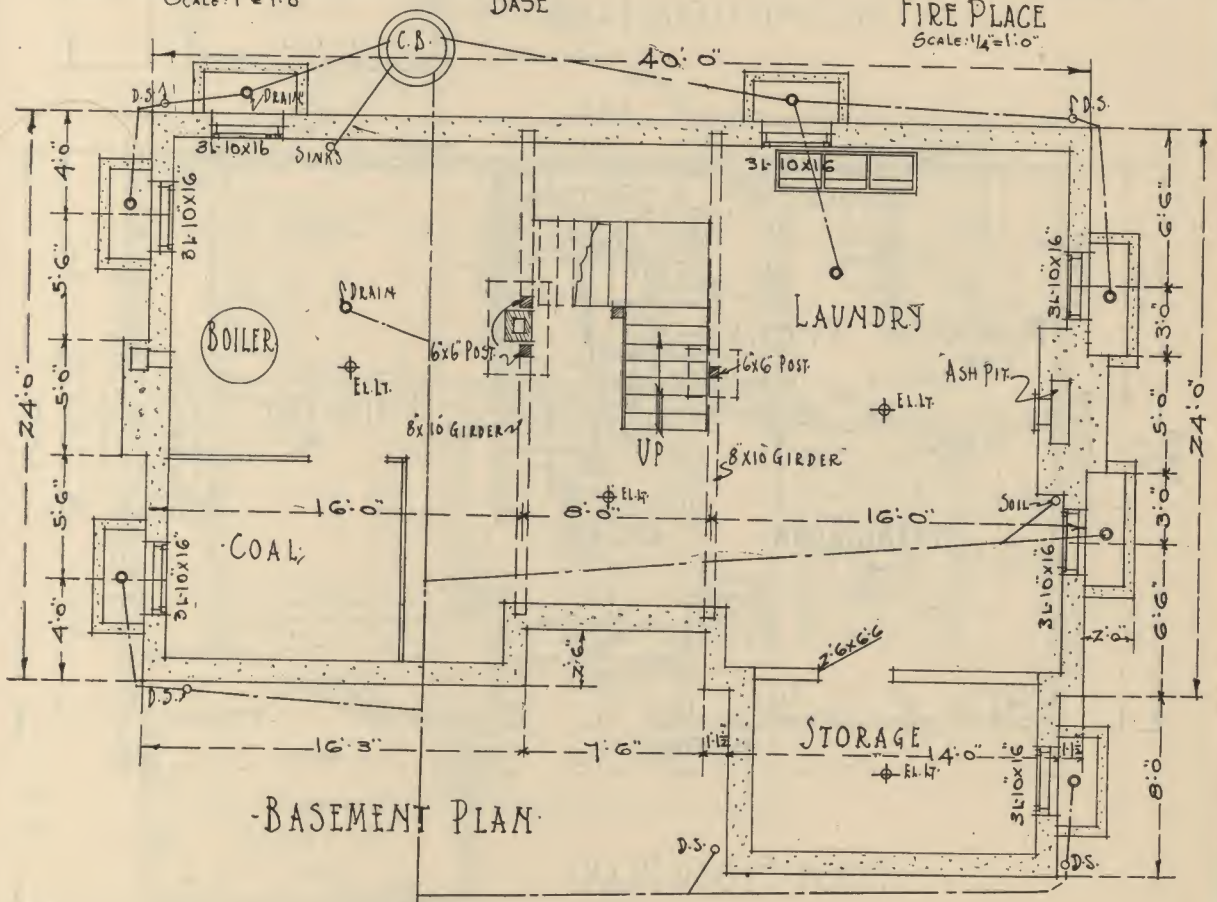
PICTURE MOULD



CHAIR RAIL

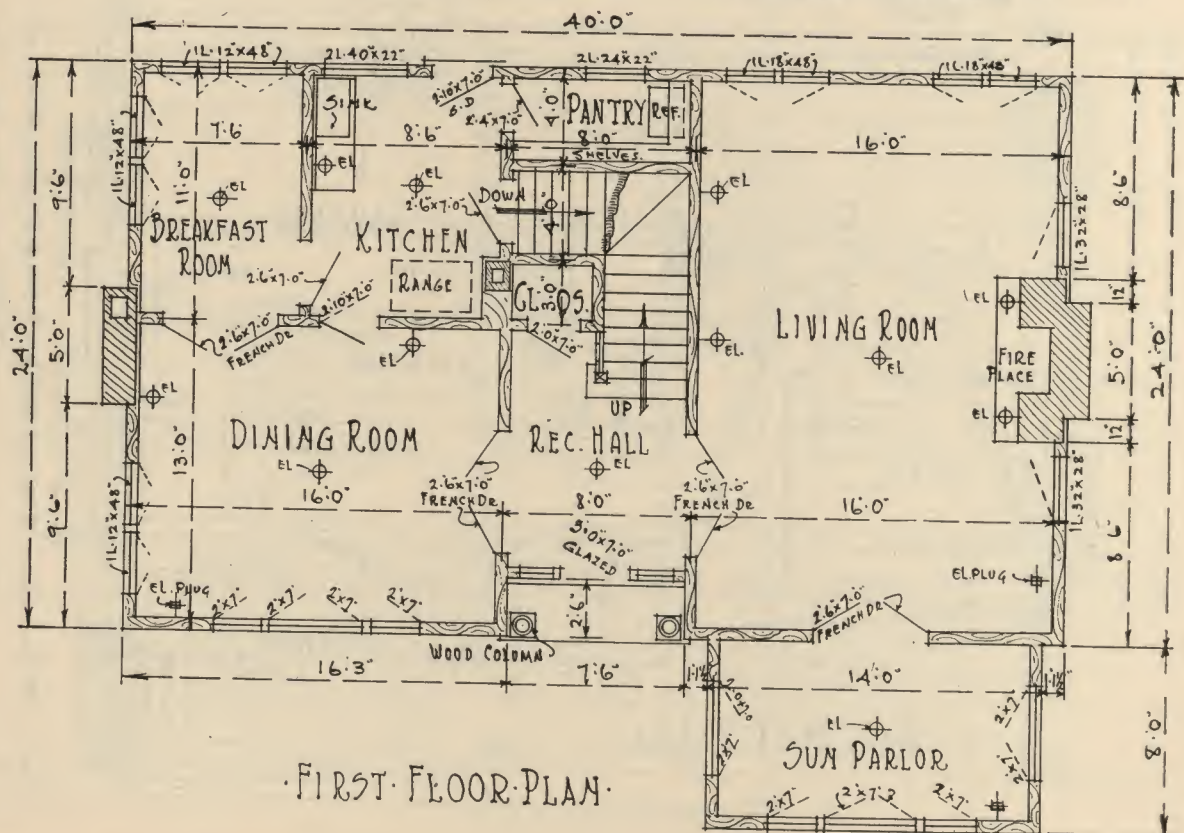
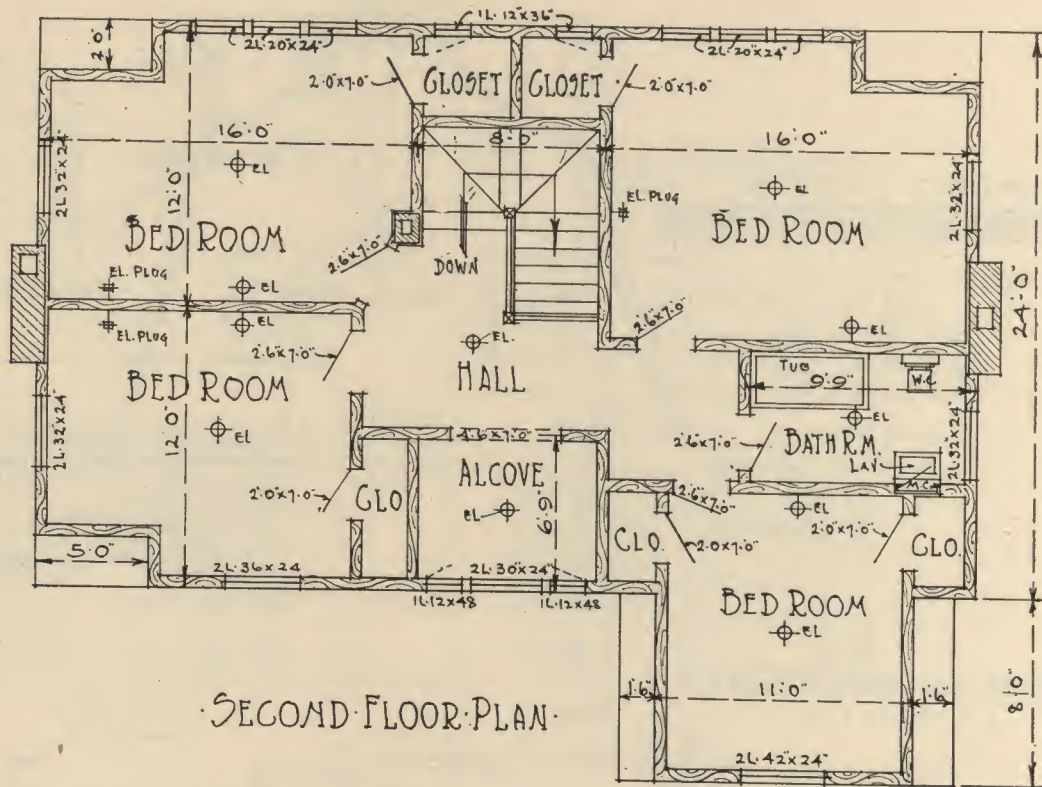


FIRE PLACE
Scale: 1/4" = 1'-0"



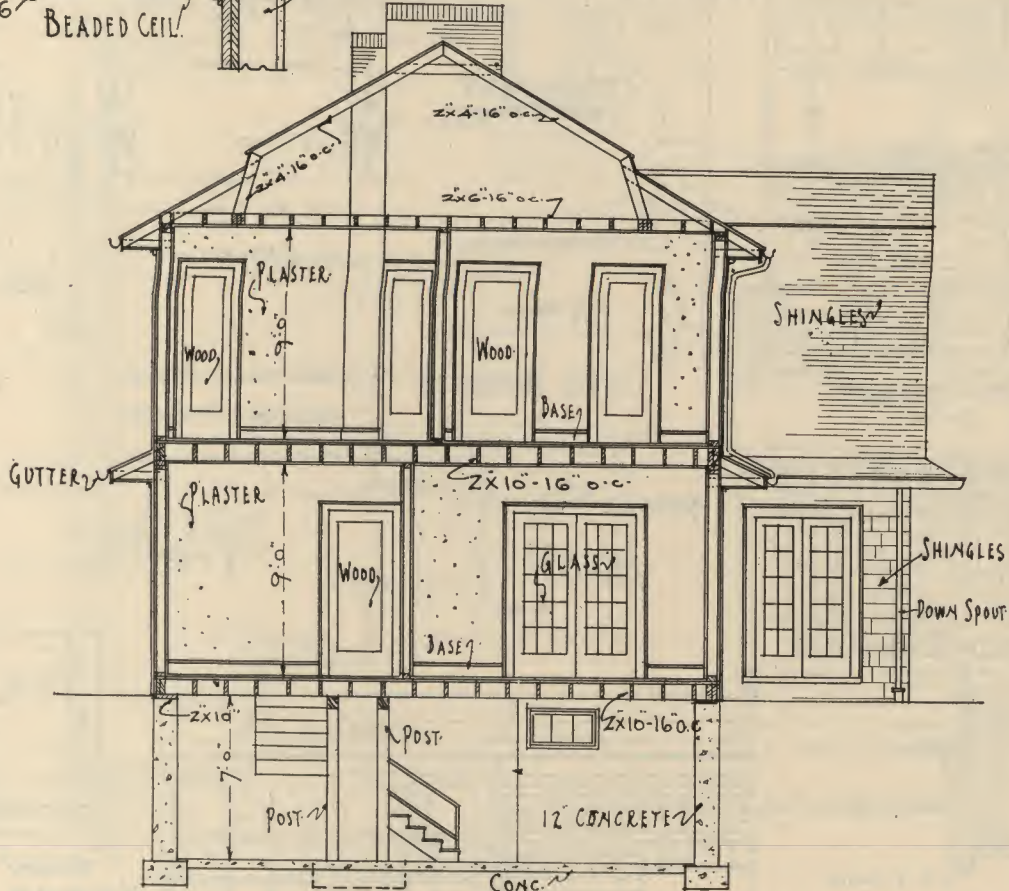
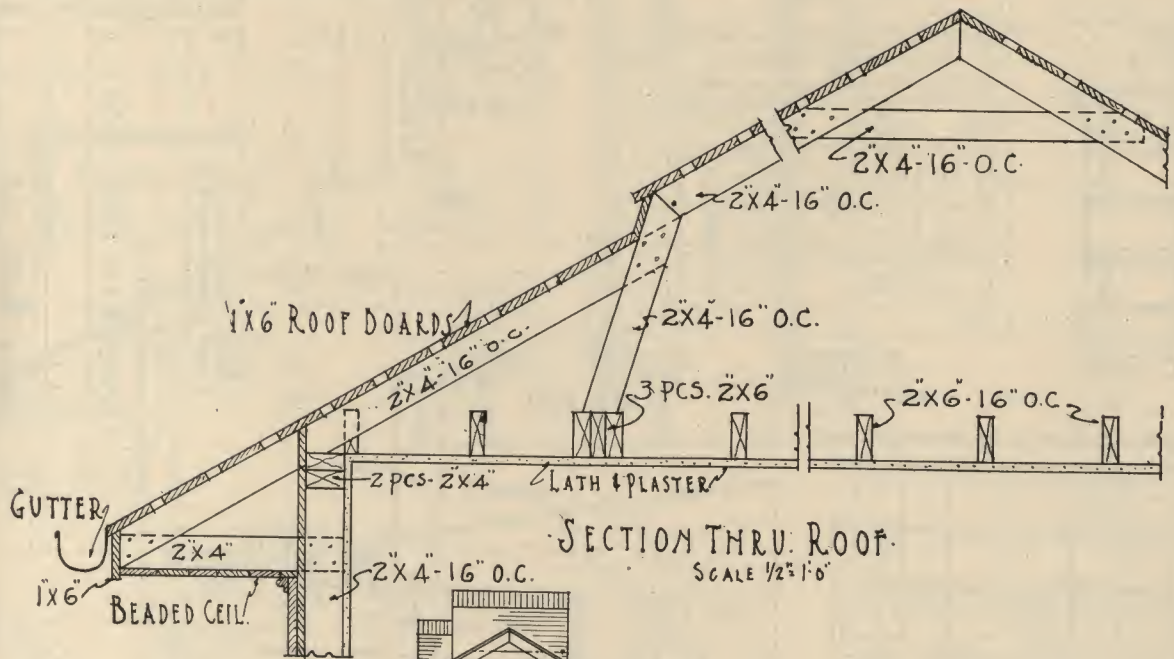
BASEMENT PLAN

PLANS OF A TWO-STORY EIGHT-ROOM RESIDENCE.
SCALE: 1/8" = 1'-0"
SHEET No 2.

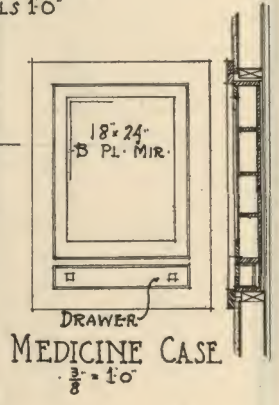
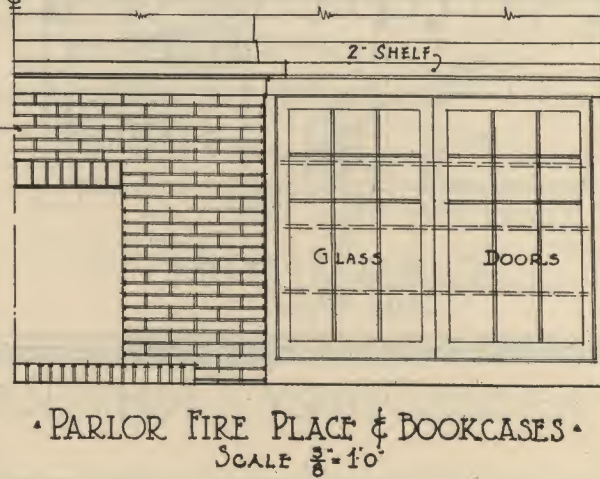
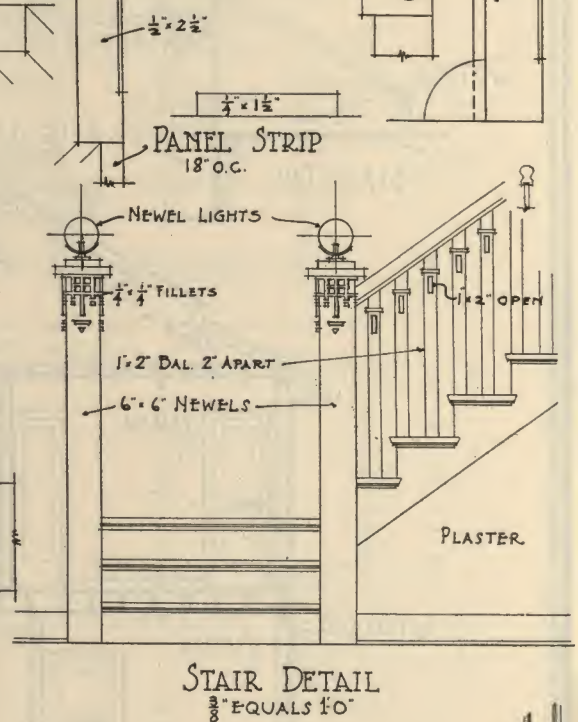
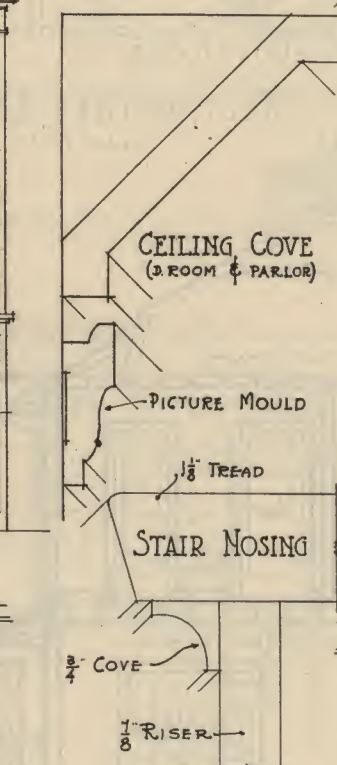
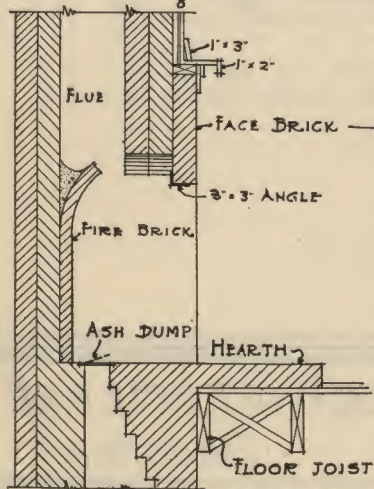
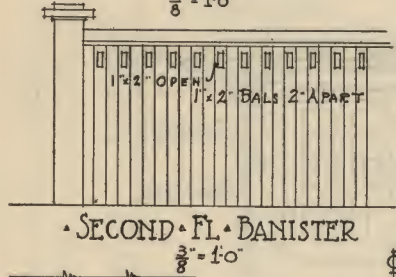
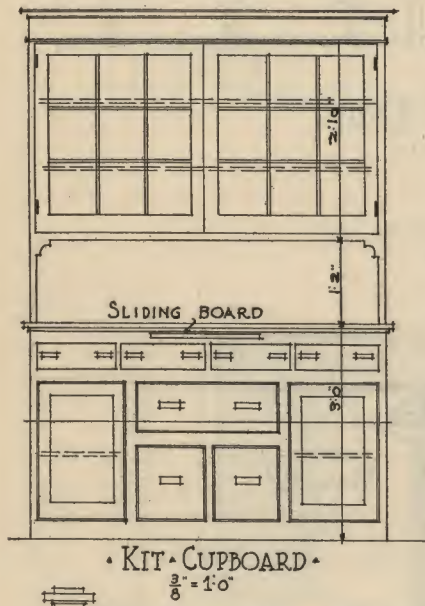
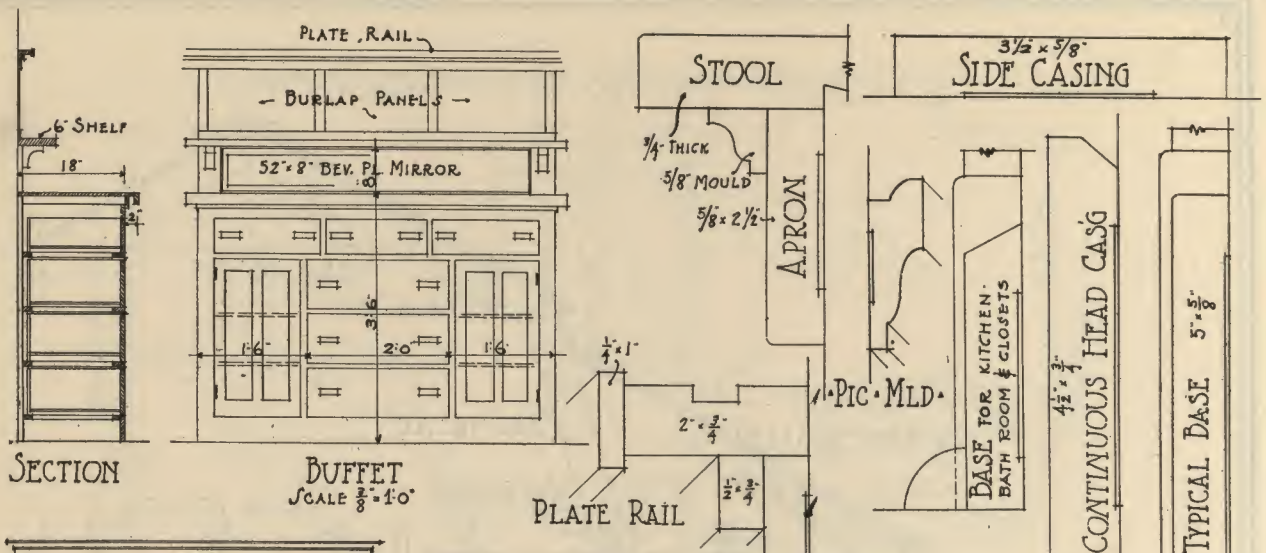


PLANS OF A TWO STORY EIGHT ROOM RESIDENCE.
SCALE $\frac{1}{8}'' = 1'-0''$

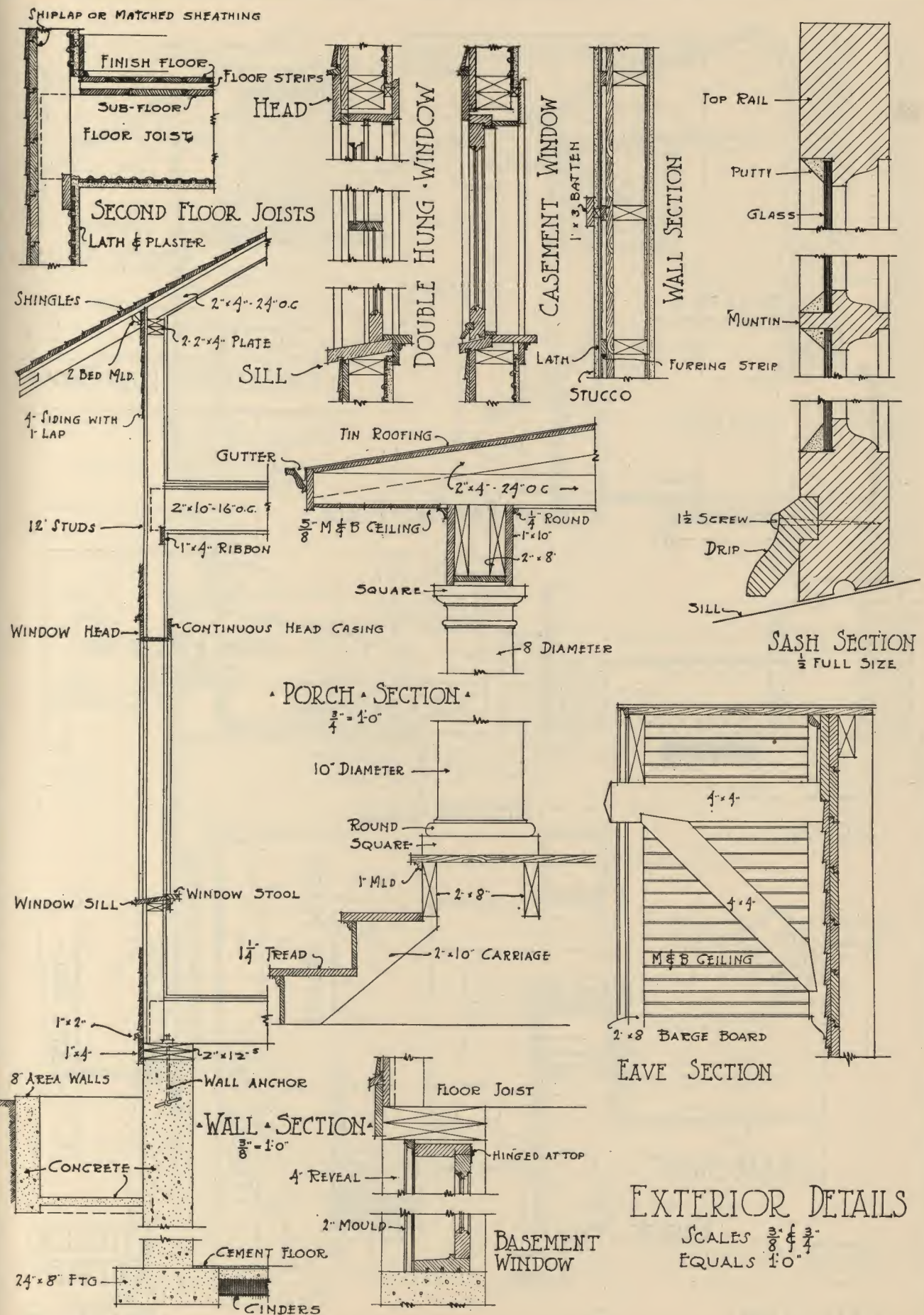
SHEET No 3.



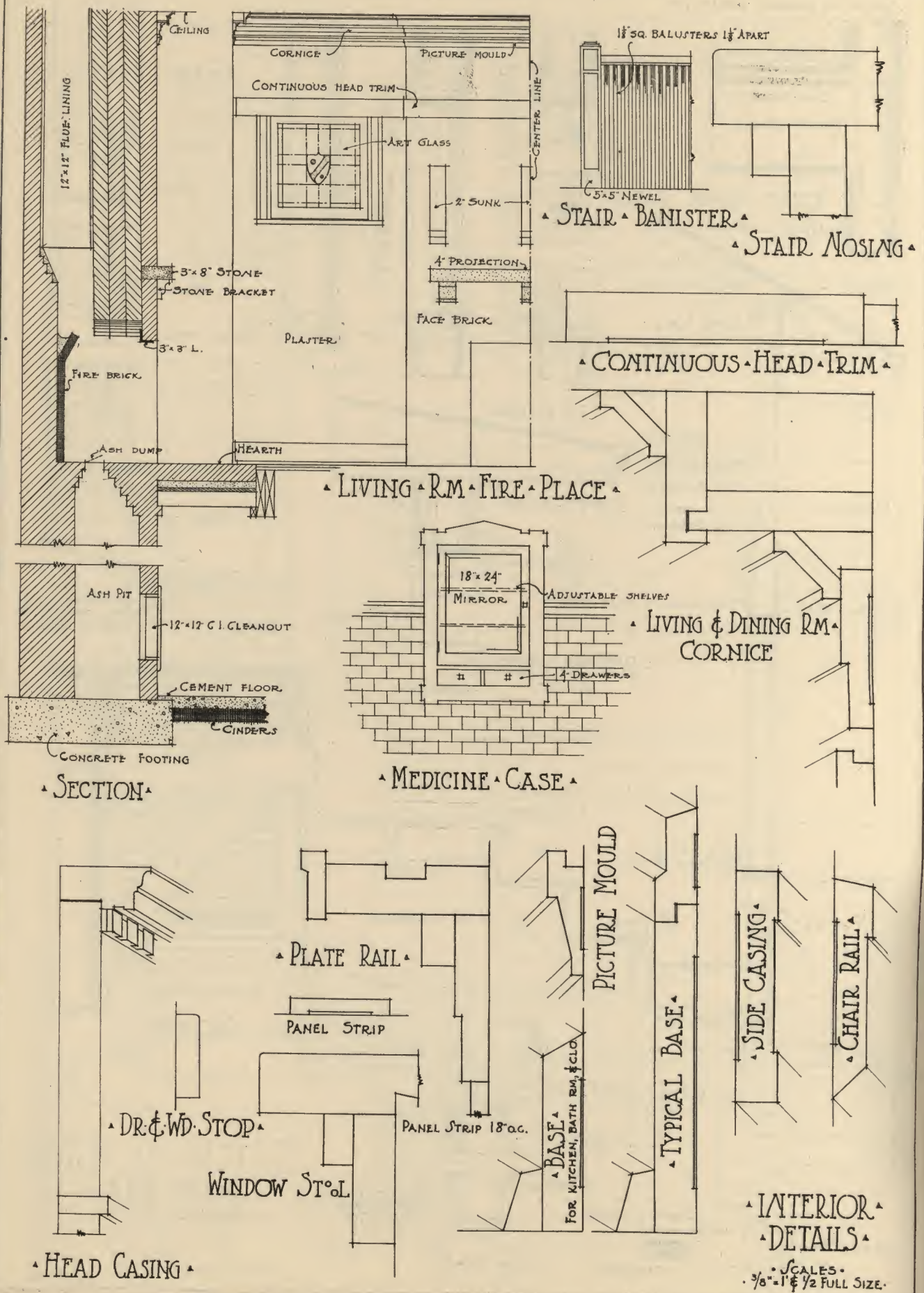
PLANS OF A TWO STORY EIGHT ROOM RESIDENCE.
 SCALE 1/8" = 1'-0"
 SHEET No 4.



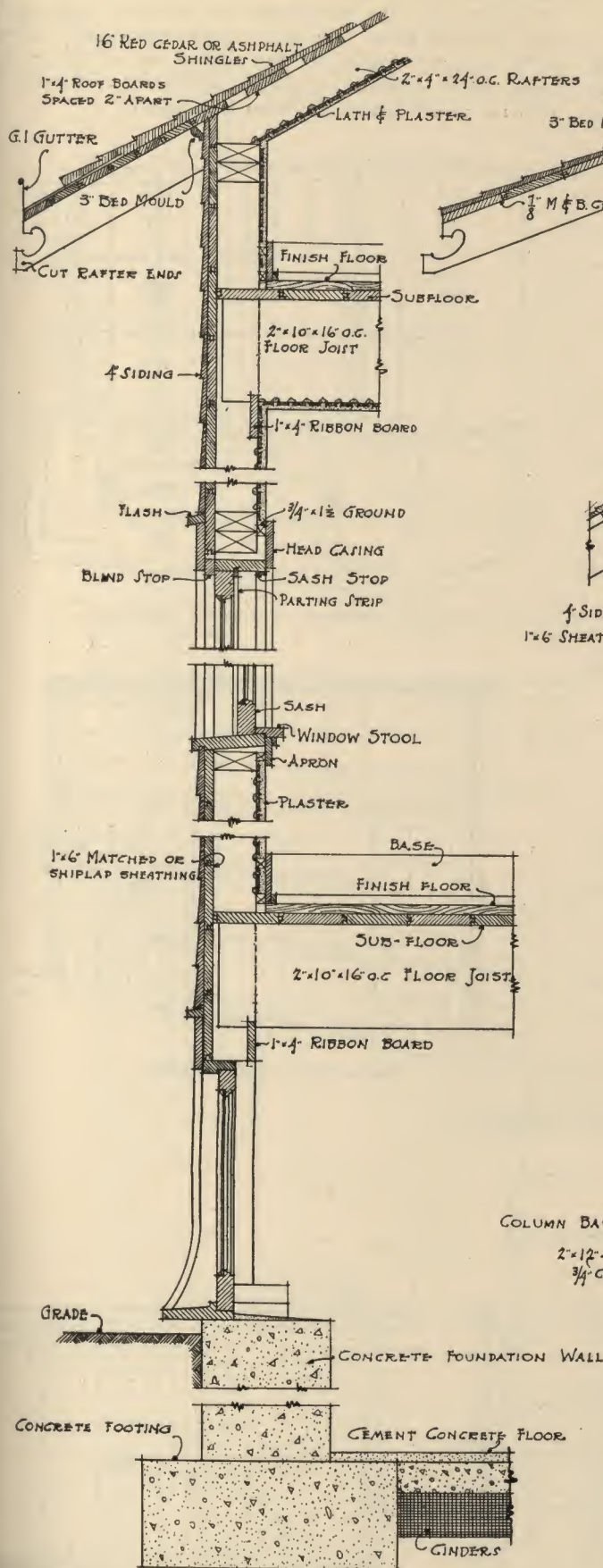
• INTERIOR •
• DETAILS •
• SCALE 3/8" = 1'-0" •
• 1/2" FULL SIZE



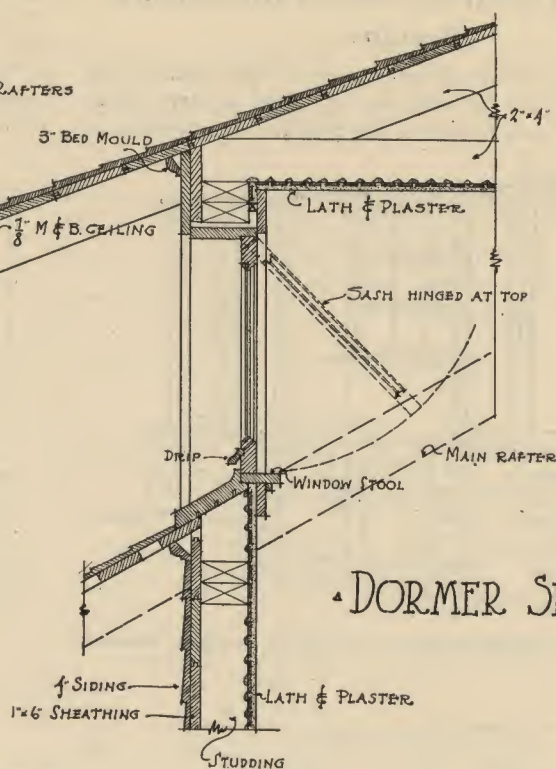
Exterior Details of Construction, to Scale, of Southern Style Residence.



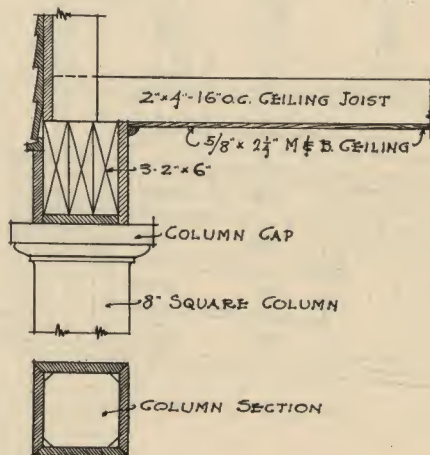
Complete Details of Interior Finish for Compact Residence.



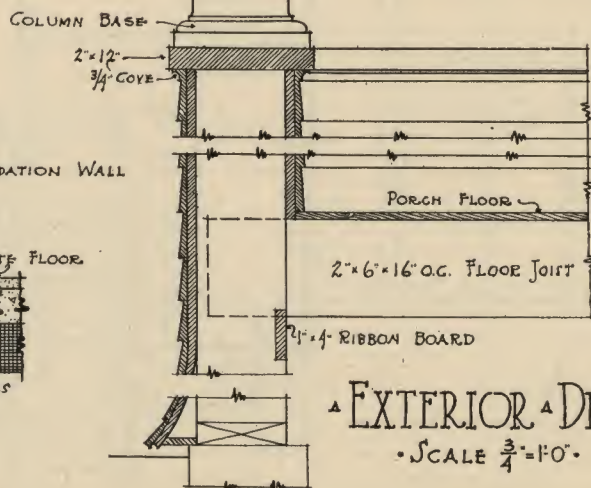
WALL SECTION



DORMER SECTION



PORCH SECTION



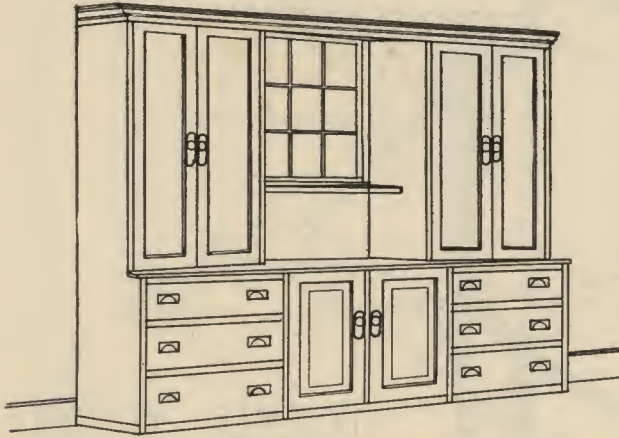
EXTERIOR DETAILS

SCALE 3/4"=1'-0"

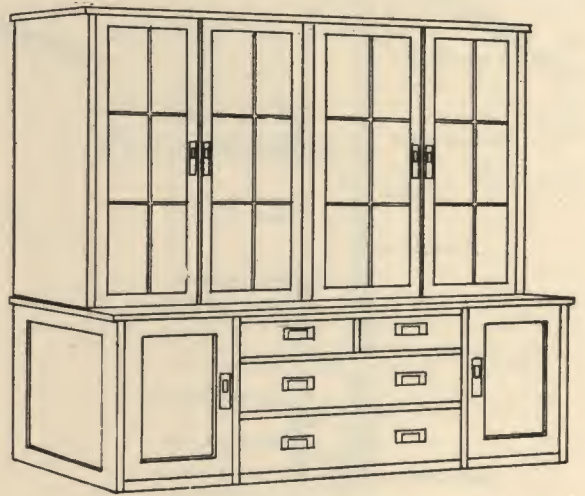
Built-in Furniture--Some Interesting Designs

ONE of the charms of the interior of any home is the furniture which is built into it. The dressers, seats, bookcases more than half solve the problem of furnishing it.

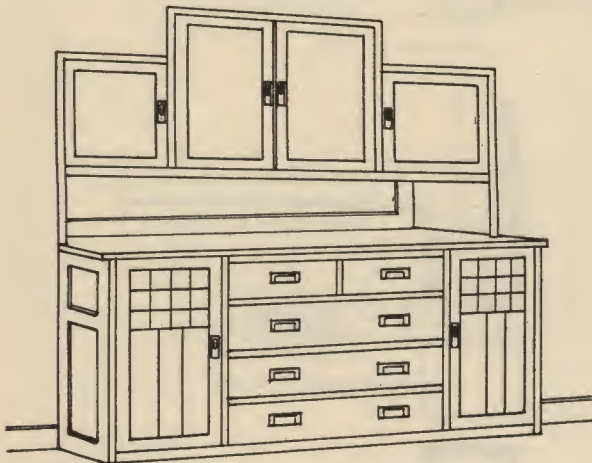
Furniture that is built to fit the place it is in, is far more decorative and more comfortable than detached pieces could be in the same place. Not only is space saved by this means, but a keynote is given for the rest of the fittings in the home, which, unless it is utterly disregarded, will tend to keep the furnishings of the room in harmony.



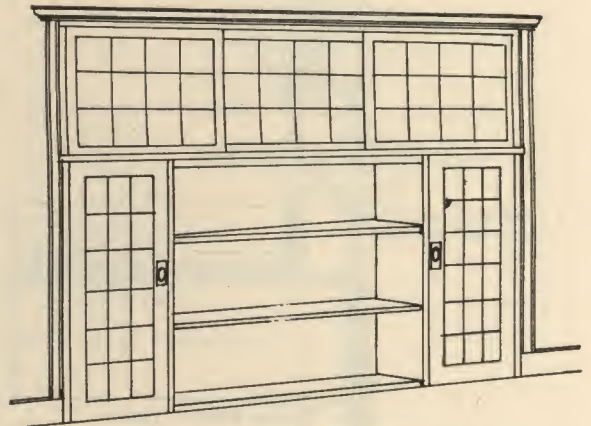
Large Kitchen Cupboard, Lighted at Center by Casement Window.



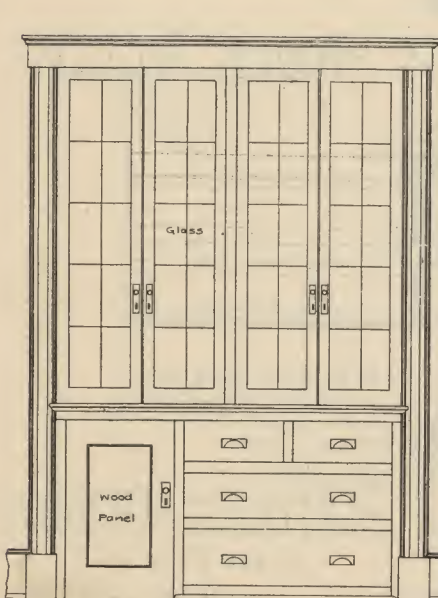
Kitchen Cupboard of Generous Dimensions.



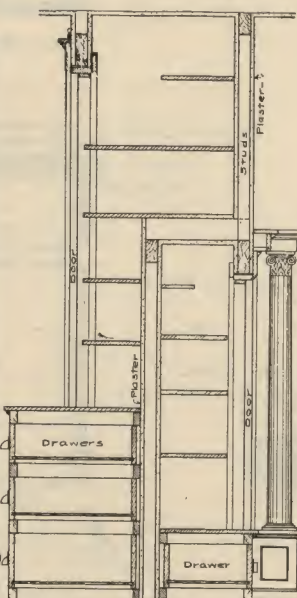
Dining Room Buffet.



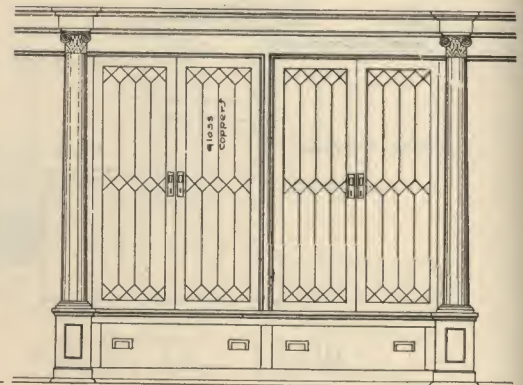
Book Cases and Book Shelves.



DRESSER

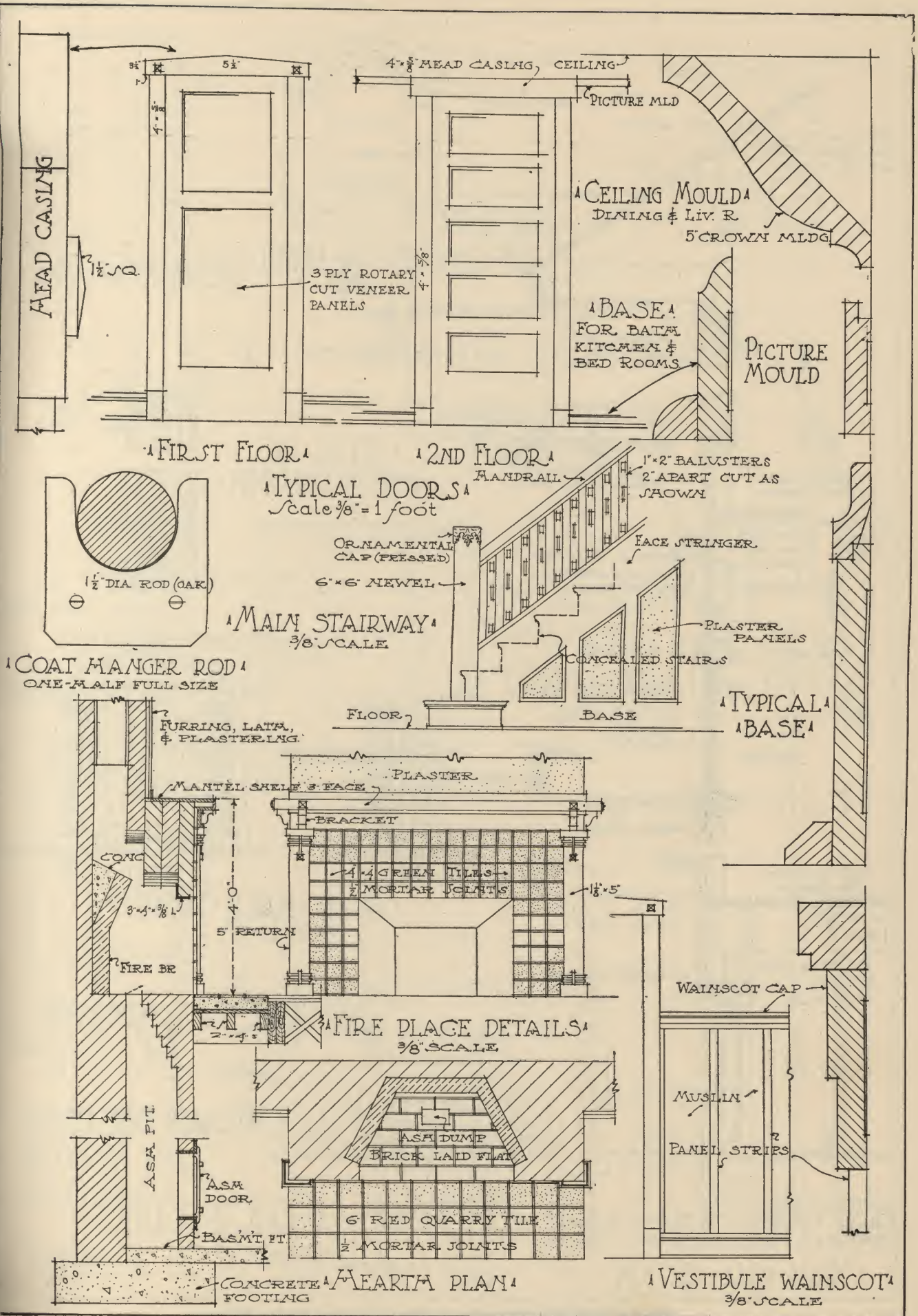


SECTION

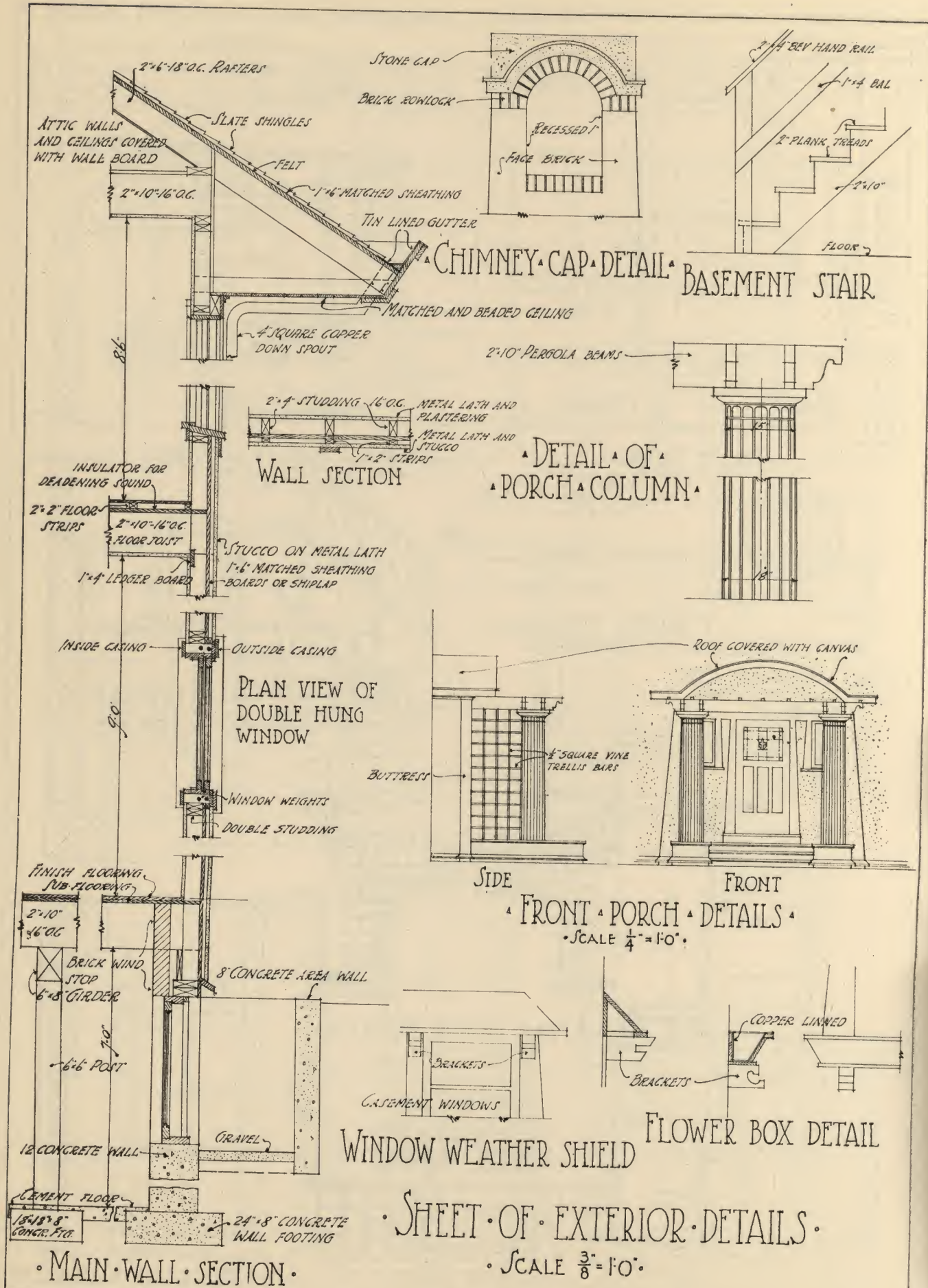


BOOKCASE.

Kitchen Dresser on One Side of Partition, Library Book Case on Other.



Details of Interior Finish of Brick and Stucco Finished Tile House.



PARLOR CEILING BEAM

DINING ROOM CEILING CORNICE

SUN PARLOR AND
DINING PORCH
CEILING CORNICE

PICTURE
MOULD

2 1/4" PANEL STRIPS

IMITATION NATURAL
LIN-O-WALL PANELS

DOUBLE STRENGTH GLASS

MUNTIN

MUNTIN

FRENCH DOOR

DINING ROOM PANELLING

SIDE CASING

DADO CAP

CHAIR RAIL

2 1/4" PANEL STRIPS

IN KITCHEN, PANTRY & BED ROOMS

IN CLOTHES CLOSETS

DR. & WD. TRIM

5/8" MOULDING
3/4" BRACKET - 3/4" WIDE
SPACED 18" APART

BRACKET 1 1/2" WIDE OVER
DOOR AND WINDOW CASINGS

BASE FOR KITCHEN,
PANTRY AND CLOSETS

RECEPTION HALL
PANELLING

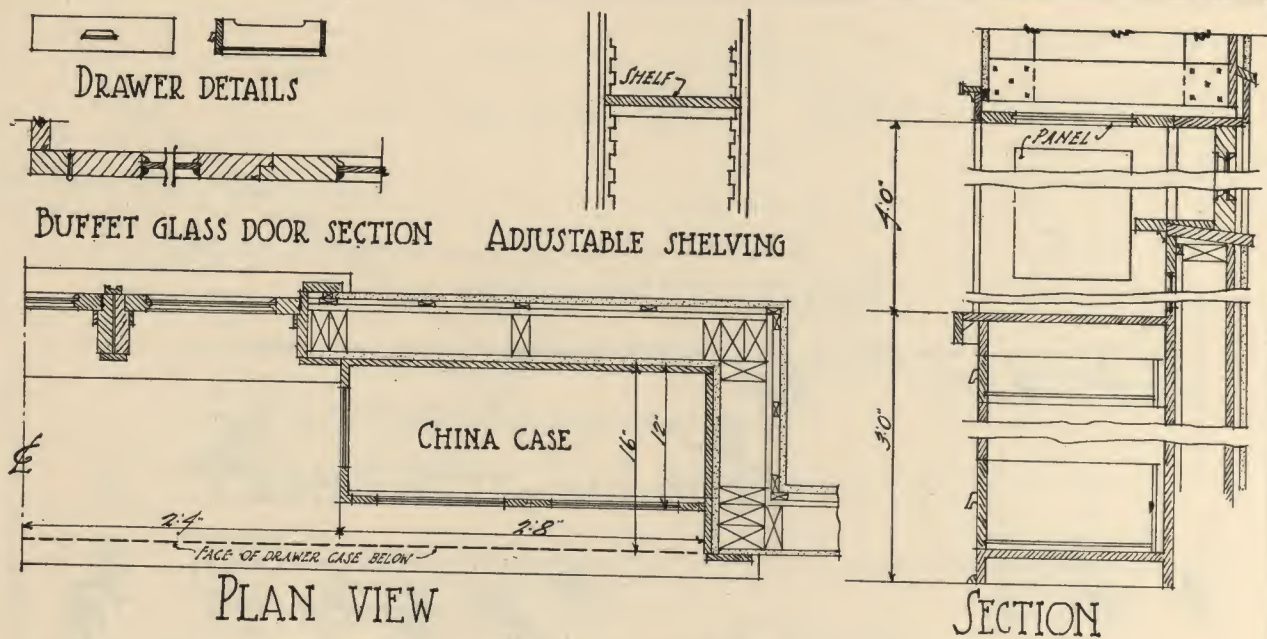
HEAD CASING

DOTTED LINE INDICATES
OUTLINE OF CONTINUOUS
HEAD TRIM

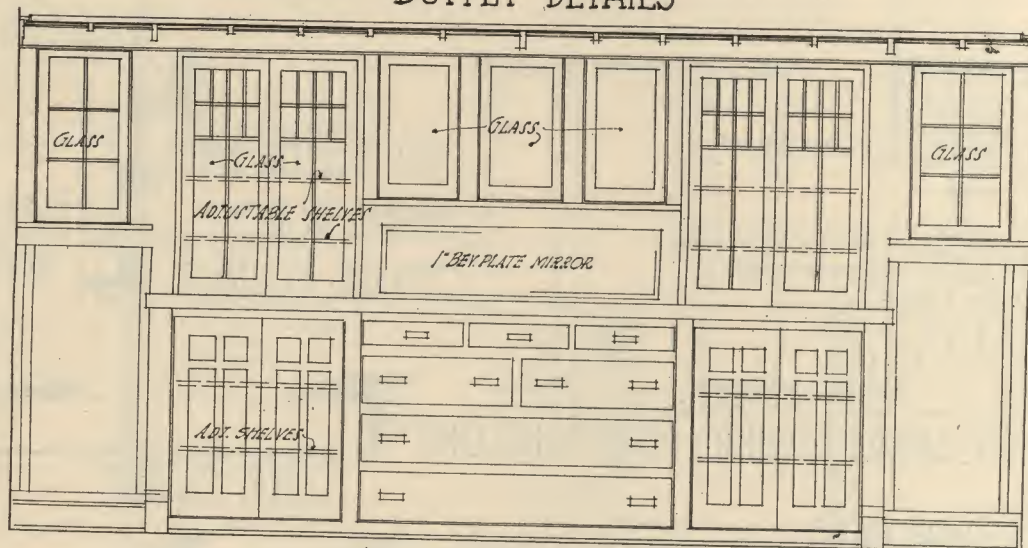
BASE TYPICAL BASE

INTERIOR DETAIL SHEET NO 1

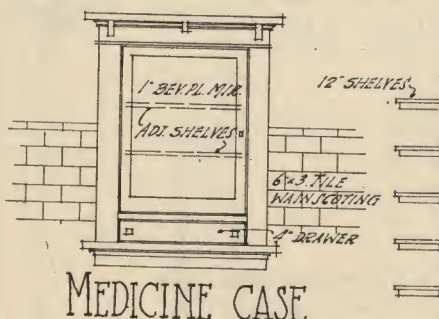
SCALE
1/2" = 1'-0"



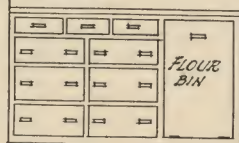
BUFFET DETAILS



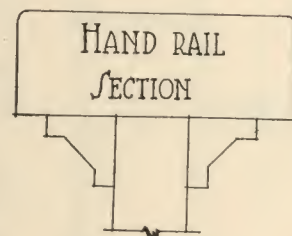
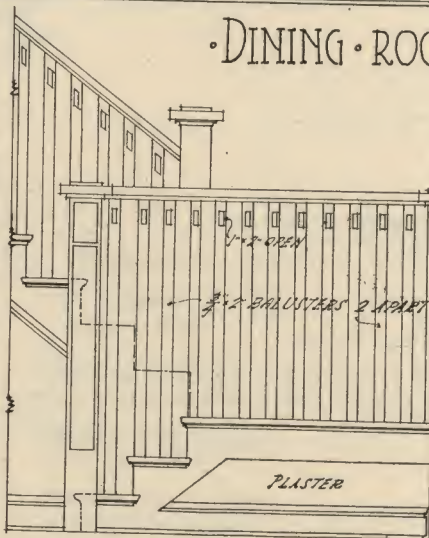
DINING ROOM BUFFET.



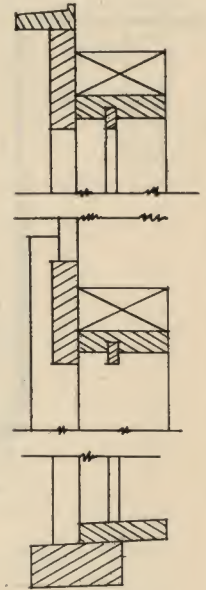
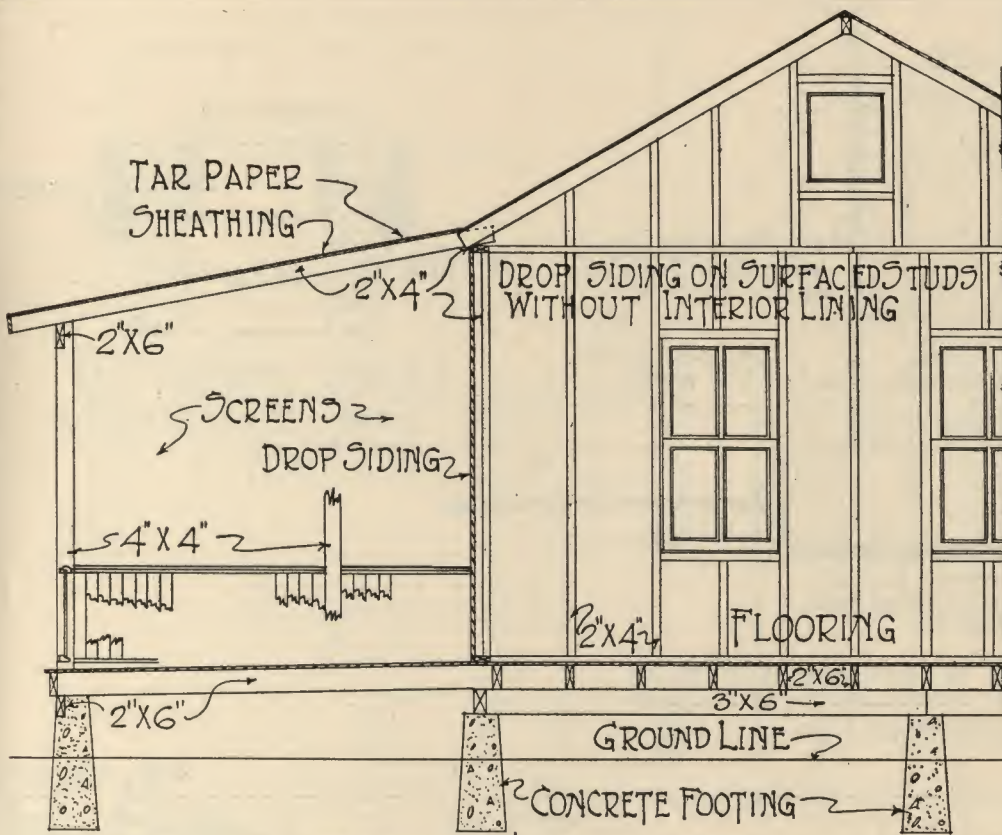
MEDICINE CASE



PANTRY DRAWER CASE. MAIN STAIR DETAIL.

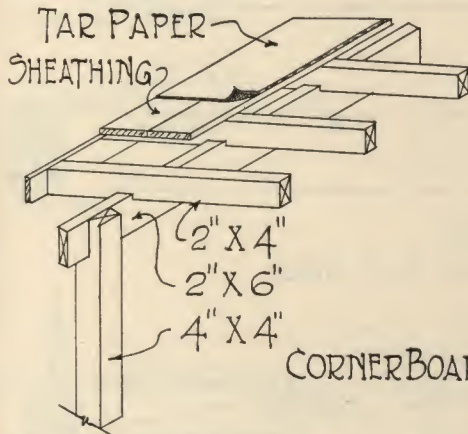
INTERIOR DETAIL.
SHEET NO. 2.

SCALE
 $\frac{1}{4}" = \frac{3}{8}" = 1'0"$

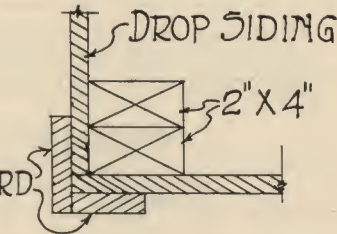


WINDOW SECTION

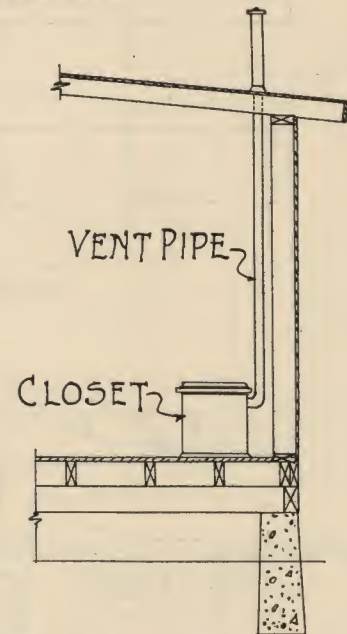
SECTION OF PORCH & PART OF DINING ROOM



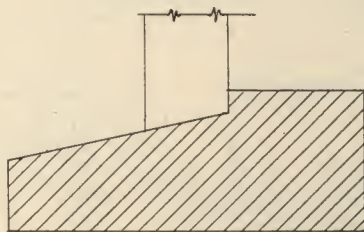
DETAIL OF PORCH ROOF



CORNER CONNECTION

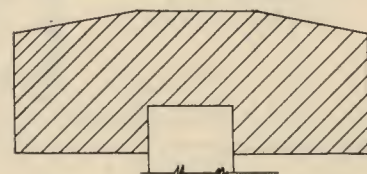


CHEMICAL CLOSET

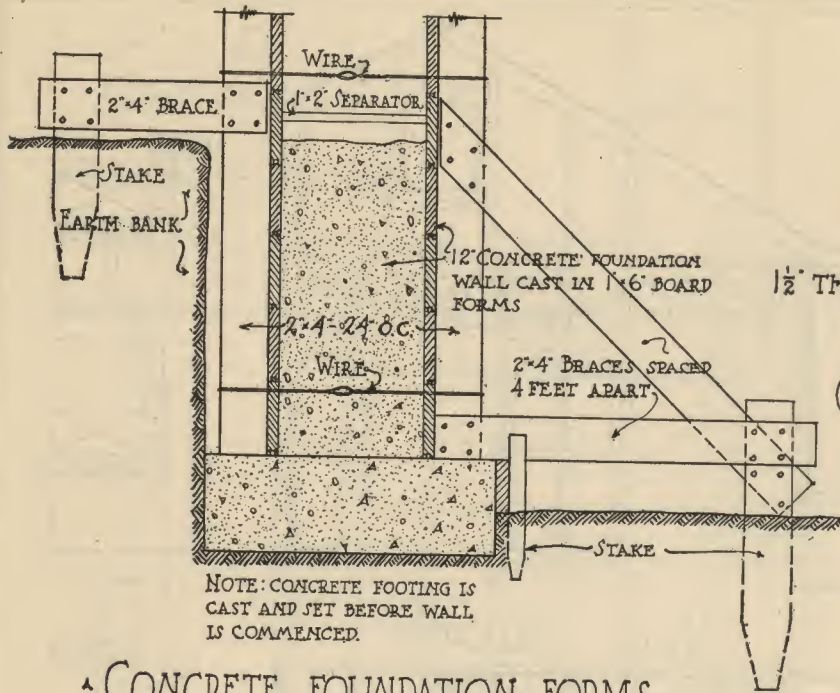


DETAIL OF BOTTOM RAIL

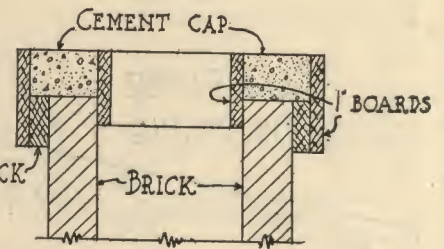
DETAILS FOR SUMMER COTTAGE



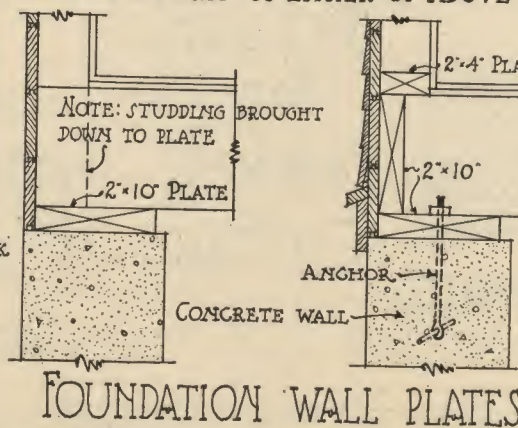
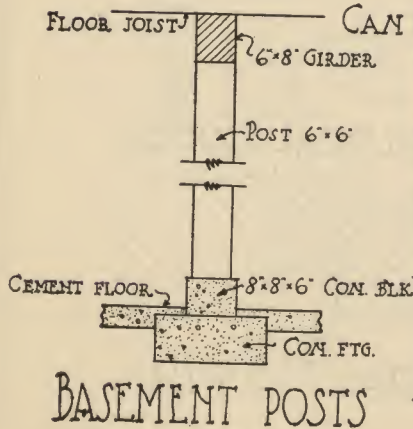
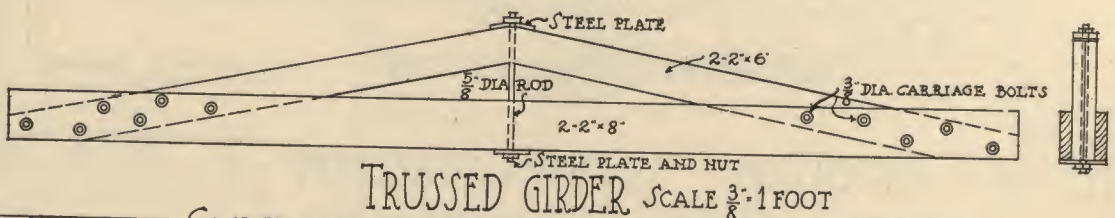
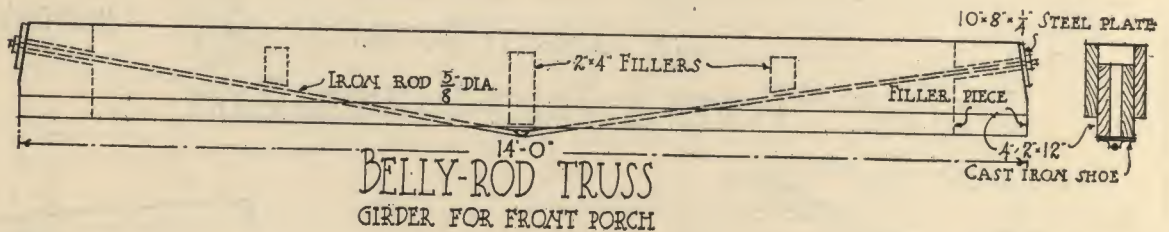
DETAIL OF TOP RAIL



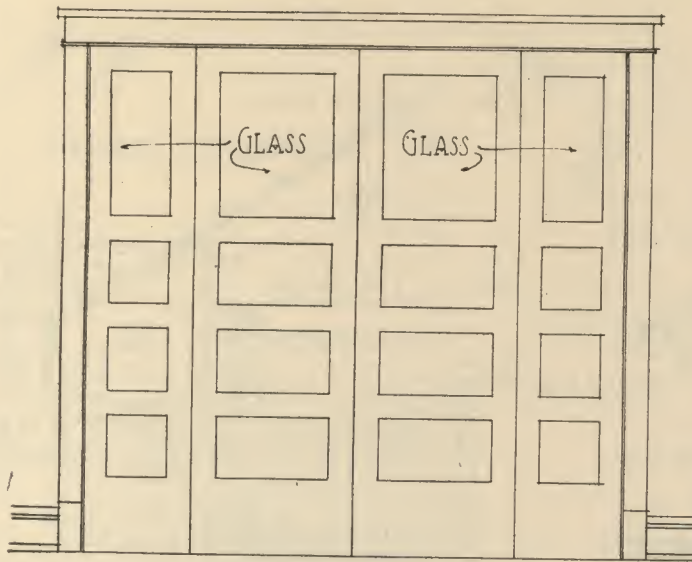
CONCRETE FOUNDATION FORMS
• $\frac{3}{4}$ " EQUALS 1'-0"



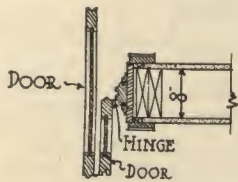
CEMENT CHIMNEY CAP
SHOWING METHOD OF CASTING
SAME IN PLACE



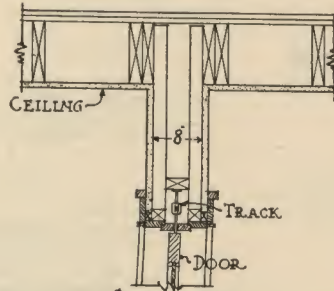
SHEET
of
EXTERIOR
DETAILS
SCALE $\frac{3}{4}$ " & $\frac{3}{8}$ " = 1 FOOT



ACCORDION DOORS
• $\frac{3}{8}'' = 1'-0''$ •



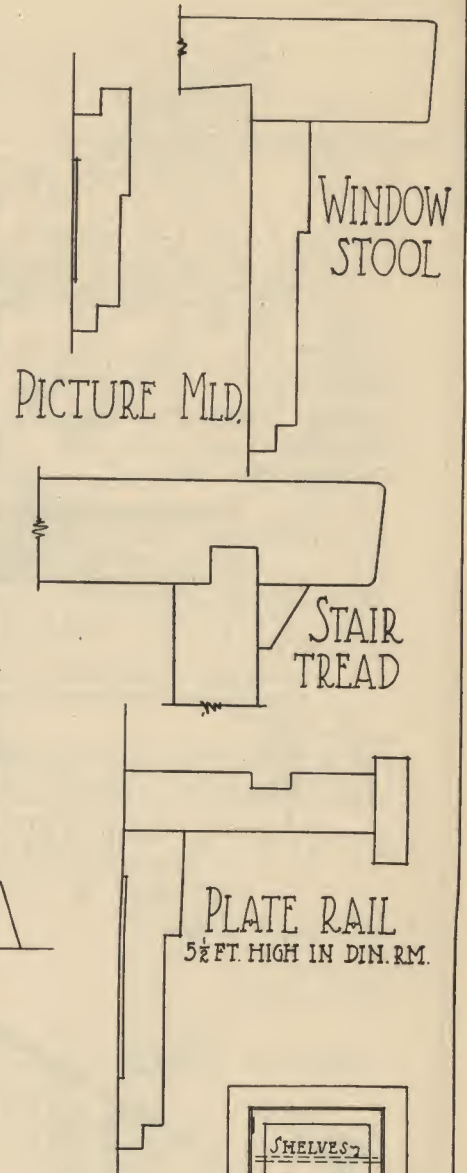
SECTION
THRU ACCORDION DOOR
JAMB



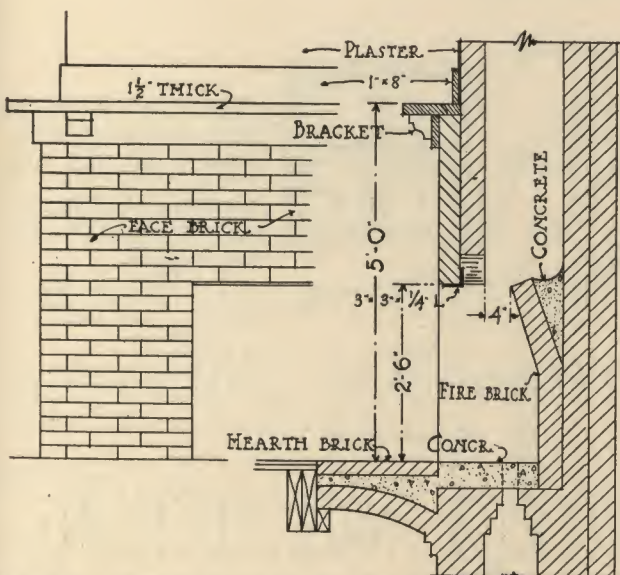
SECTION
THRU ACCORDION DOOR
HEAD SHOWING OVERHEAD
TRACK CONSTRUCTION



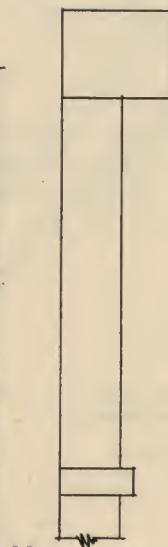
BASE



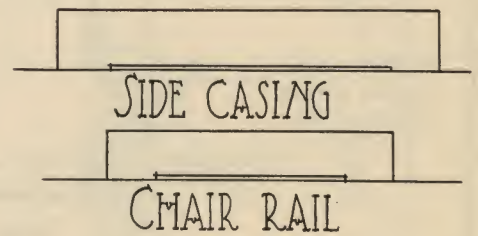
MEDICINE CASE



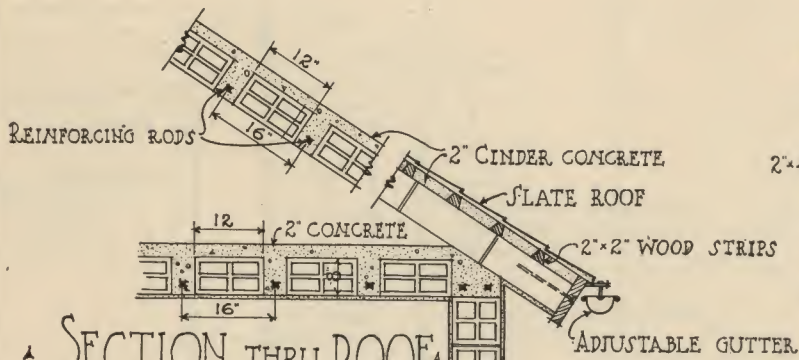
HALF ELEVATION & SECTION
• SCALE $\frac{3}{8}''$ EQUALS 1'-0'' •



HEAD CASING

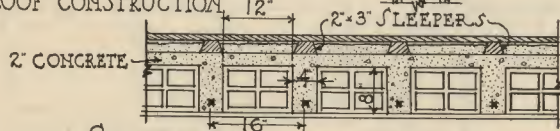


• SCALE $\frac{3}{8}'' = 1' \frac{1}{2}''$ FULL SIZE •



SECTION THRU ROOF

SHOWING COMBINATION TILE AND REINFORCED CONCR. FLOOR AND ROOF CONSTRUCTION.

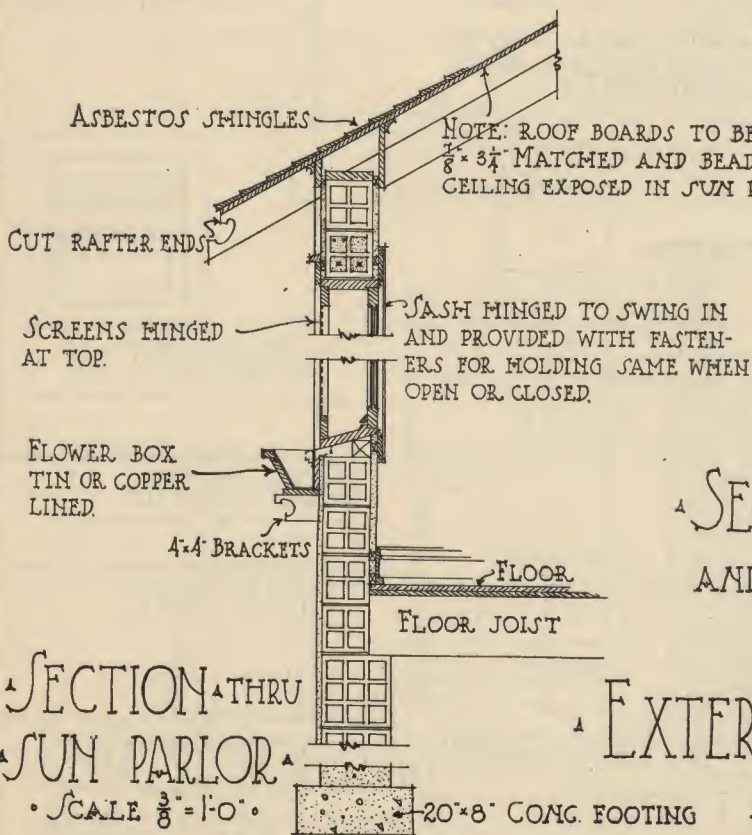


SECTION THRU FLOOR

SHOWING COMBINATION TILE AND REINFORCED CONCRETE FLOOR CONSTRUCTION.

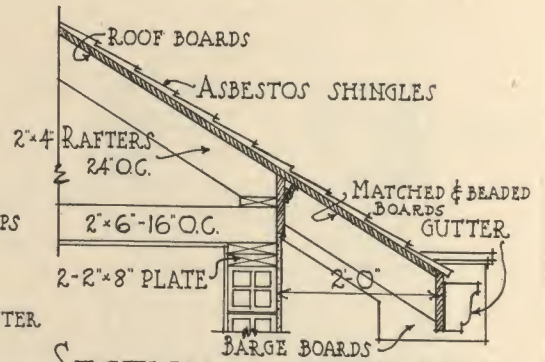
FIRE-PROOF WALL FLOOR AND ROOF CONSTRUCTION

SCALE $\frac{3}{8}'' = 1'-0''$

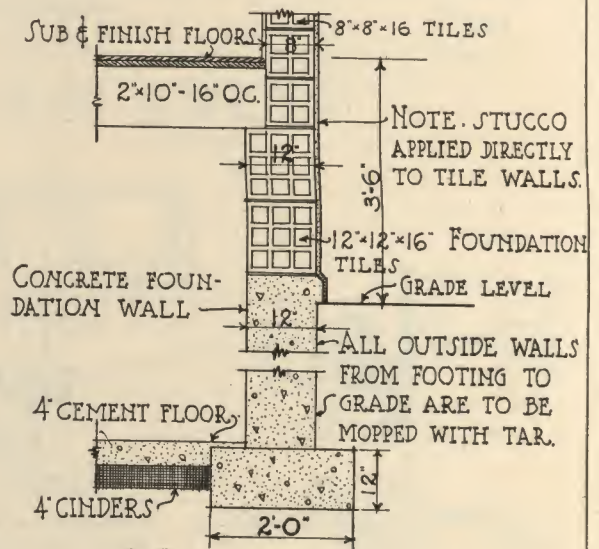


SECTION THRU SUN PARLOR

SCALE $\frac{3}{8}'' = 1'-0''$

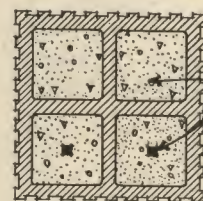


SECTION THRU ROOF EAVE



WALL SECTION

SCALE $\frac{3}{8}'' = 1'-0''$

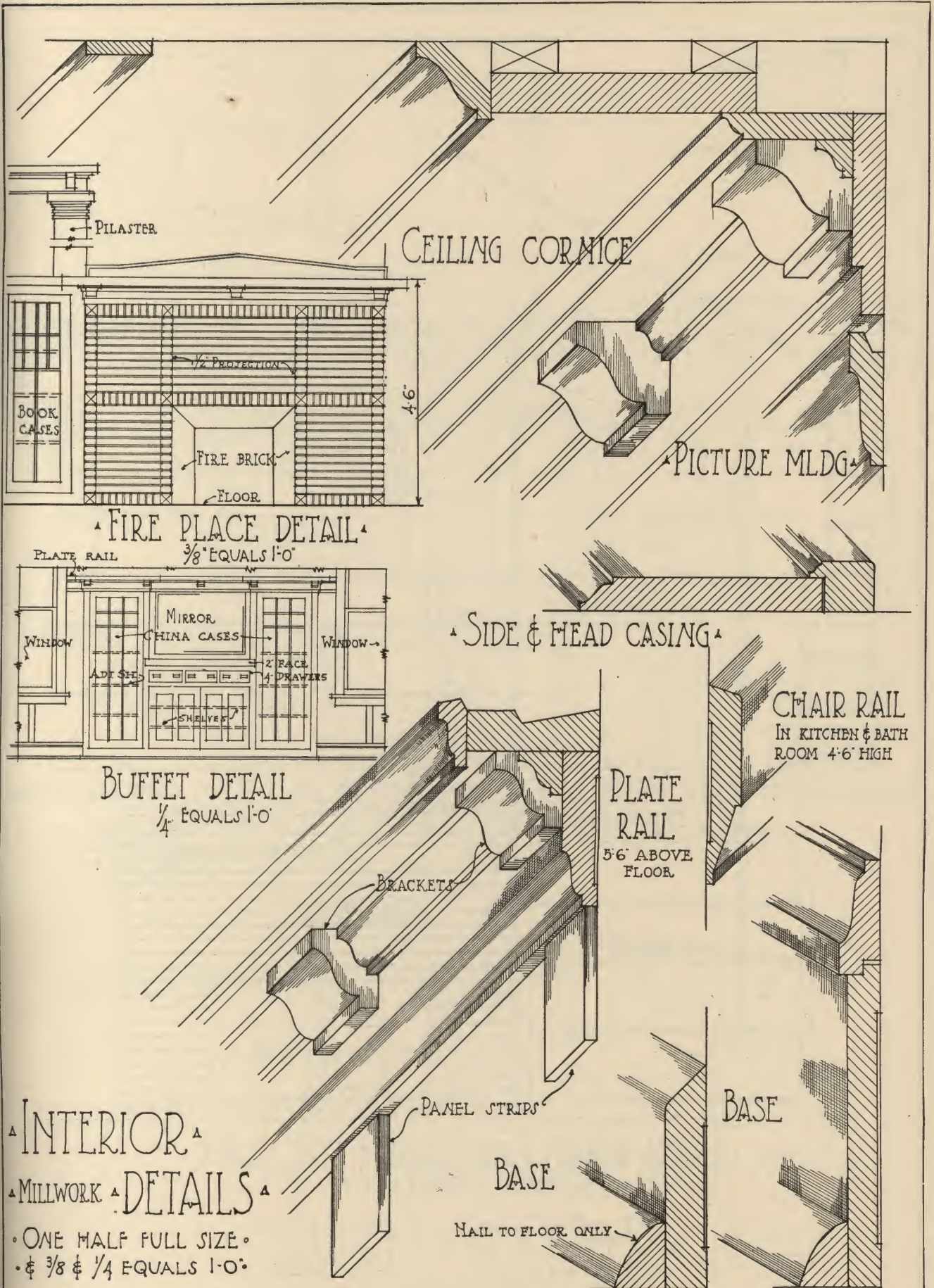


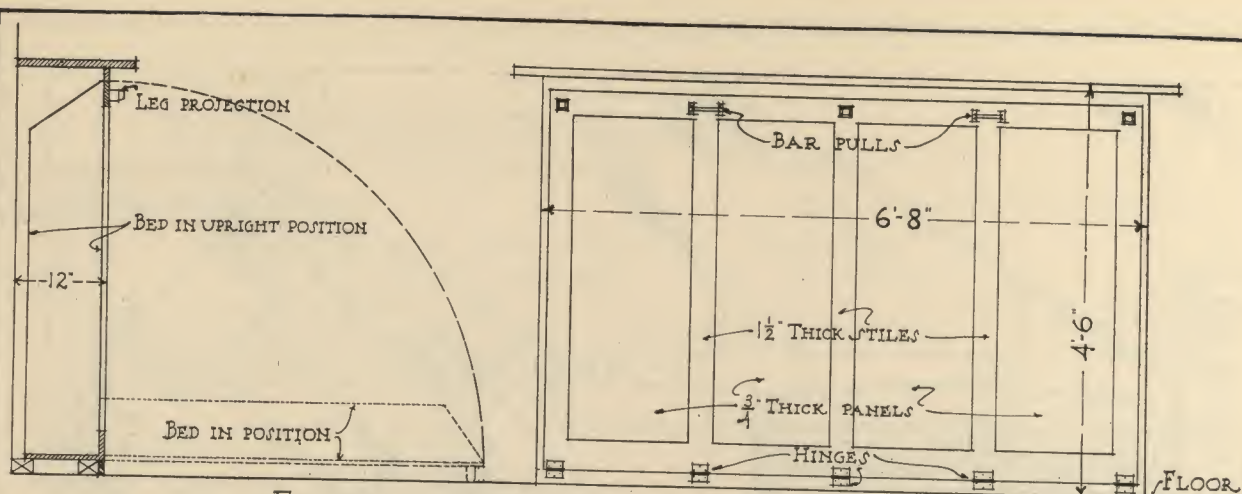
SECTION THRU ALL DOOR AND WINDOW LINTELS

SCALE $\frac{1}{2}'' = 1'-0''$

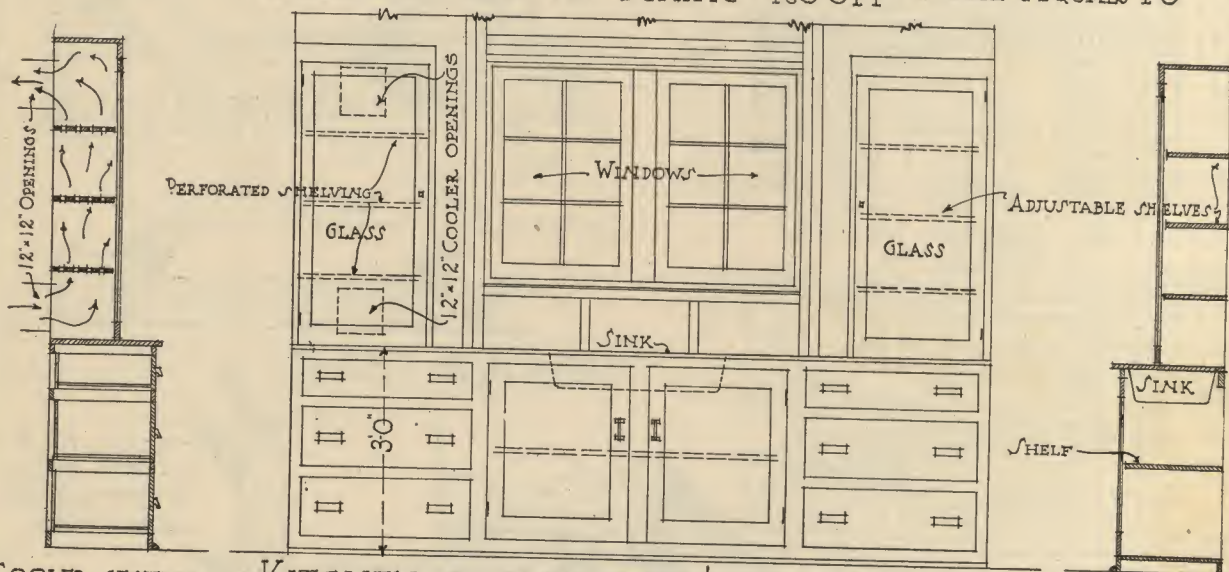
EXTERIOR WALL SECTION DETAILS

SCALE $\frac{3}{8}'' \& \frac{1}{2}'' = 1 \text{ FOOT}$

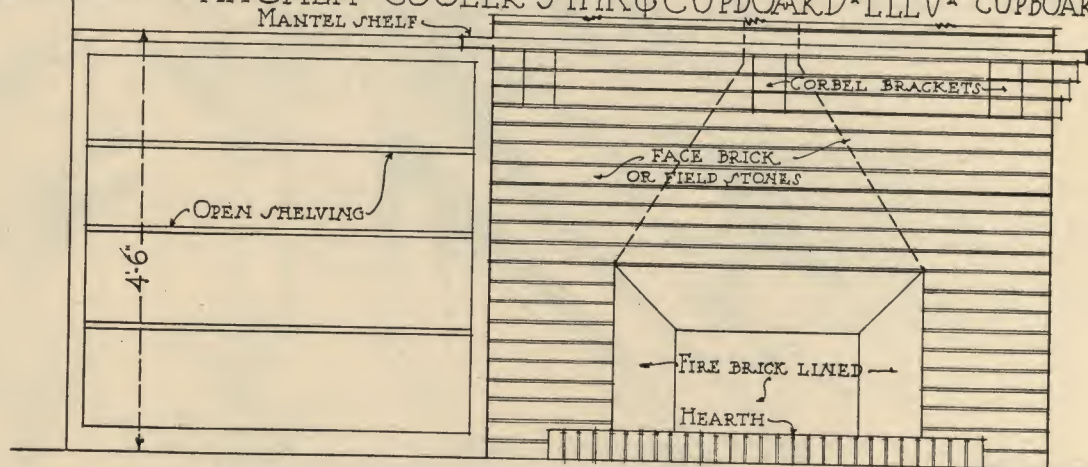




A FOLDING BED IN DINING ROOM A SCALE 1" EQUALS 1'-0"



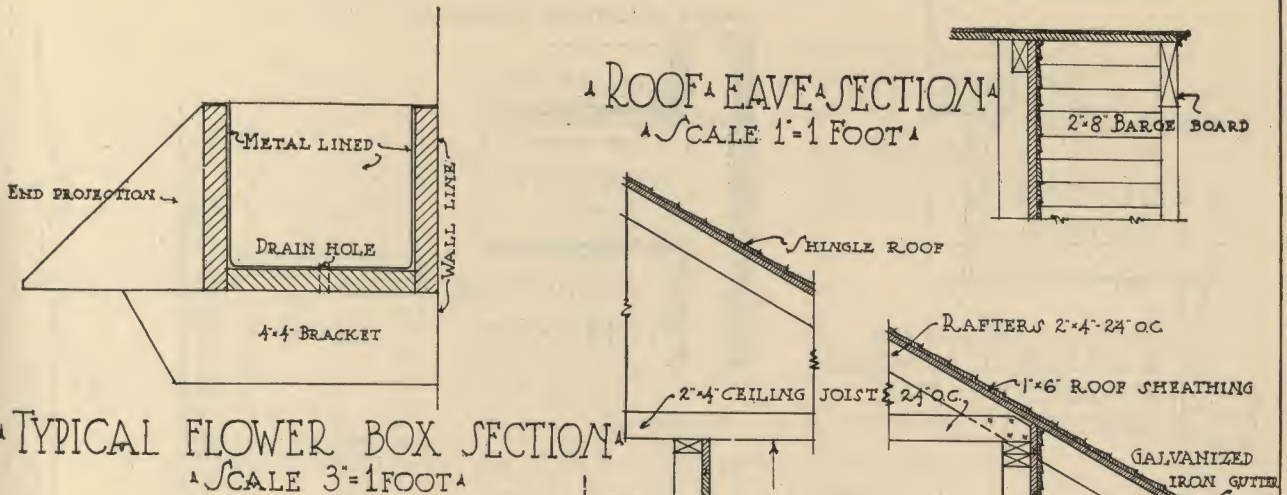
COOLER SECTION A KITCHEN COOLER SINK & CUPBOARD ELEV A CUPBOARD SECTION



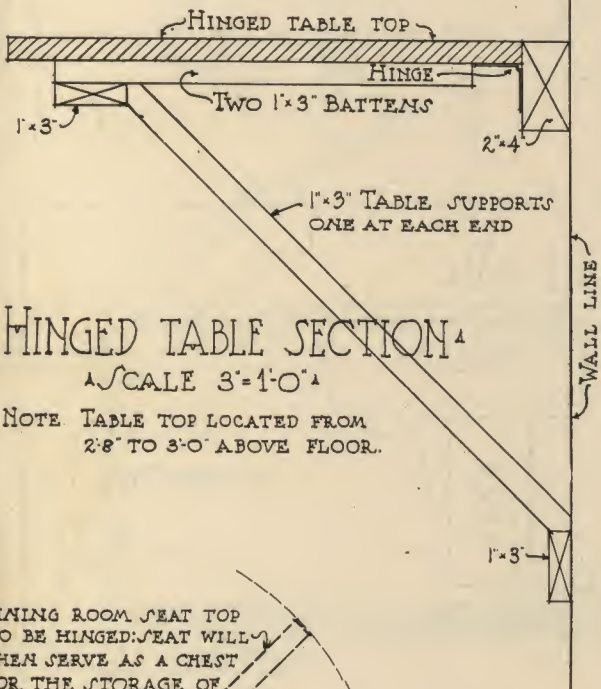
A LIVING ROOM BOOK CASE & FIRE PLACE A
A SCALE 1" EQUALS 1'-0"

A SHEET A 9 A DETAILS A
A SCALE 3/4" TO 1" EQUALS 1 FOOT A

A ROOF EAVE SECTION
SCALE 1"=1 FOOT



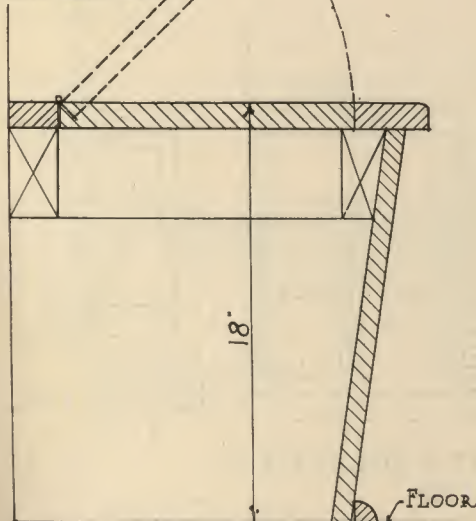
A TYPICAL FLOWER BOX SECTION
SCALE 3"=1 FOOT



A HINGED TABLE SECTION
SCALE 3"=1'0"

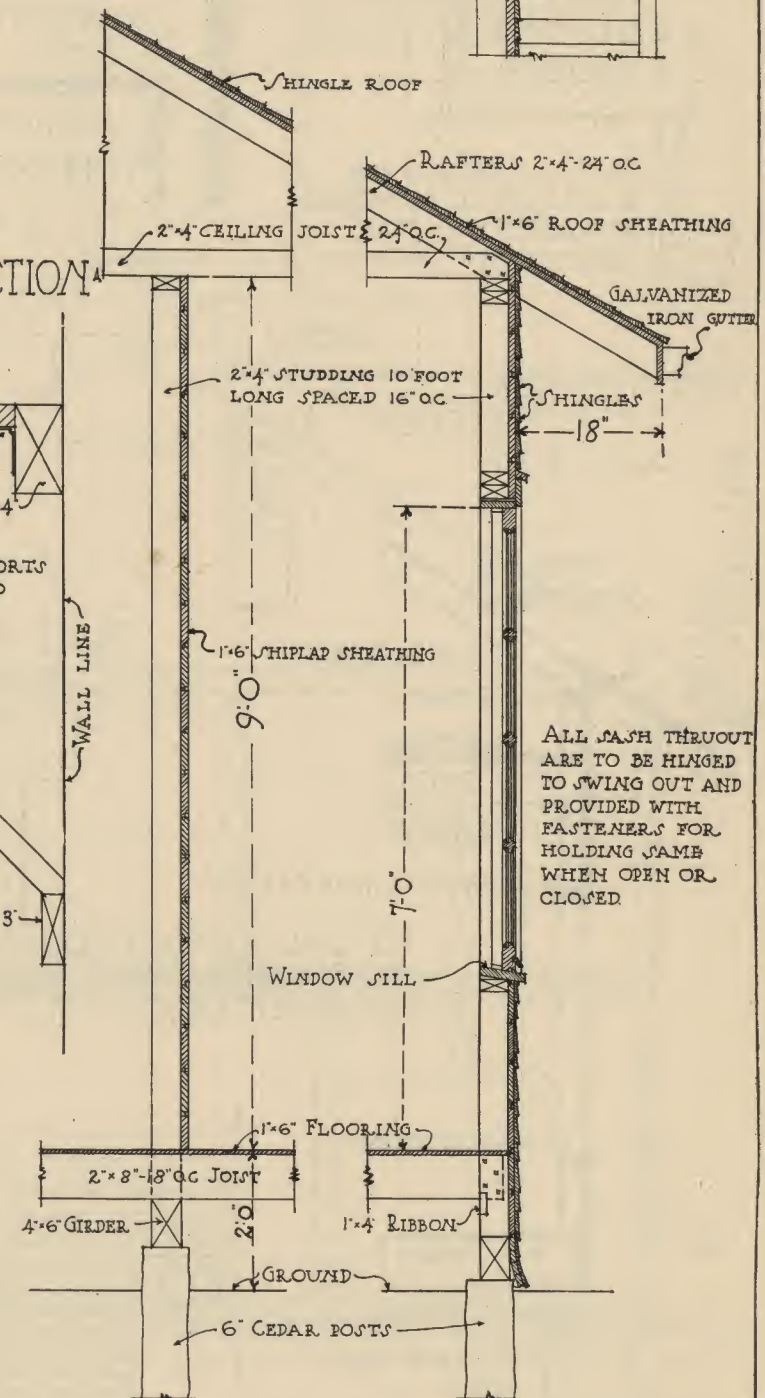
NOTE TABLE TOP LOCATED FROM
2'8" TO 3'0" ABOVE FLOOR.

DINING ROOM SEAT TOP
TO BE HINGED: SEAT WILL
THEN SERVE AS A CHEST
FOR THE STORAGE OF
ODDS AND ENDS ETC.

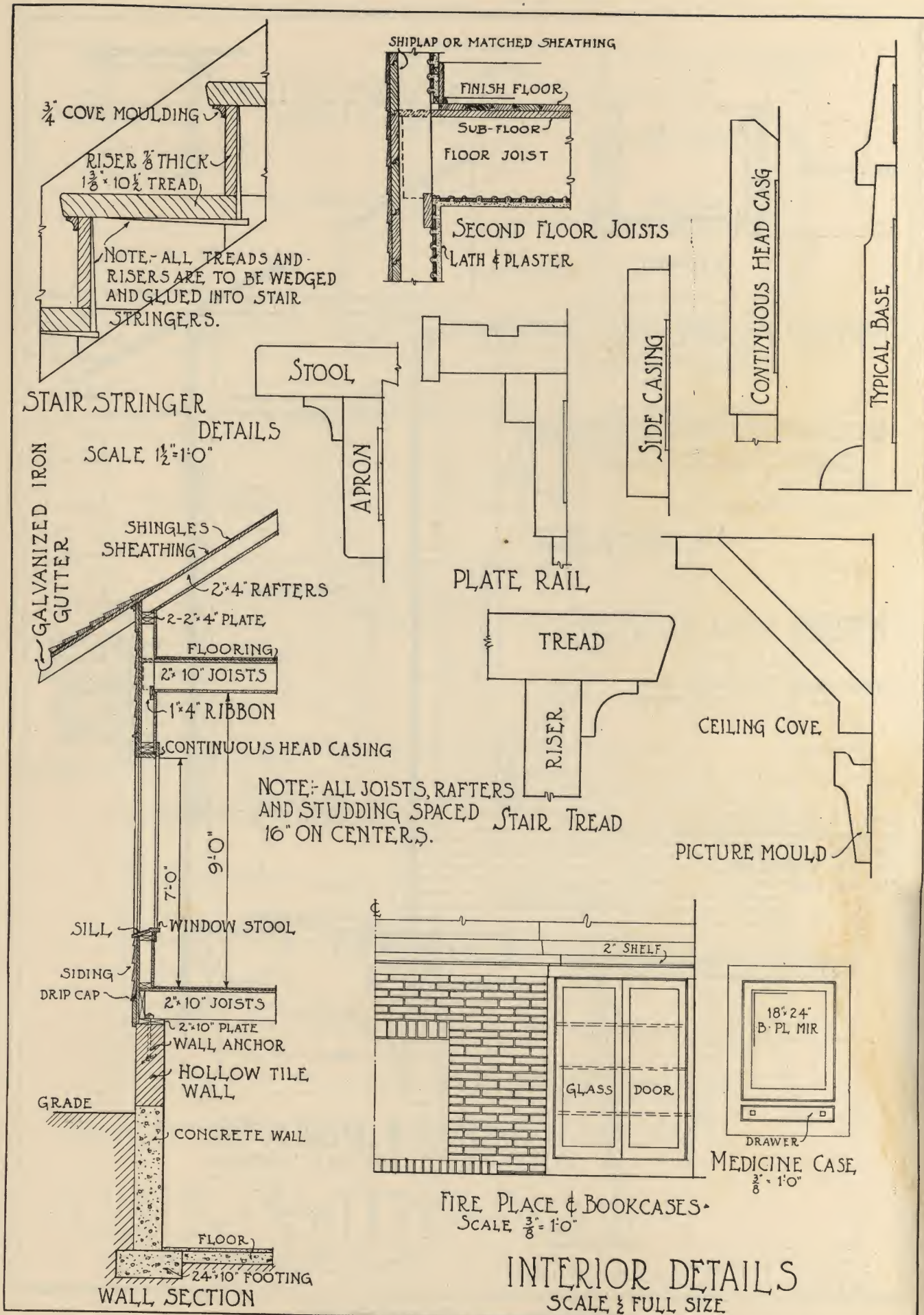


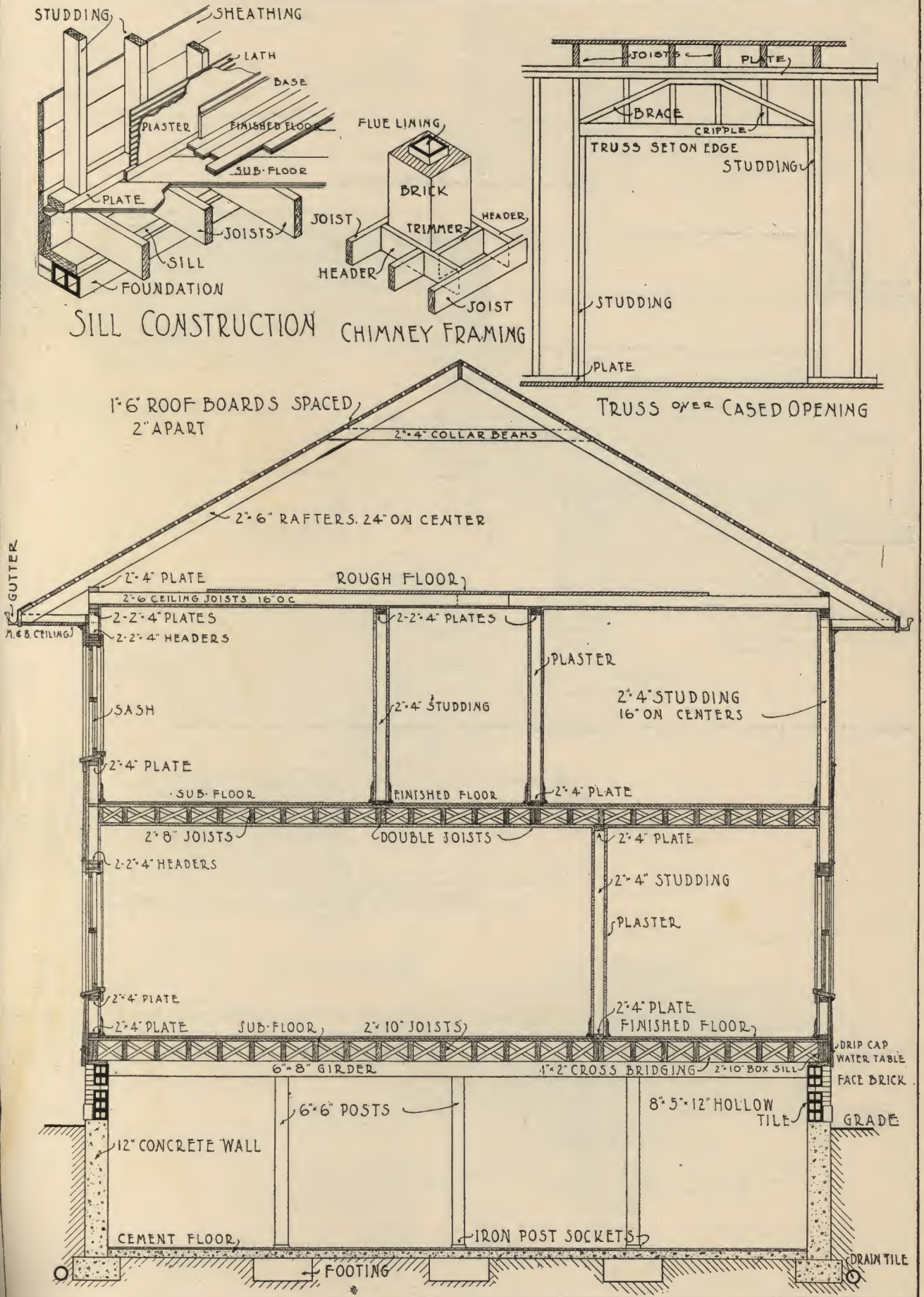
A SEAT SECTION SCALE 3"=1'0"

A INTERIOR & EXTERIOR WALL SECTIONS
SCALE 1"=1 FOOT



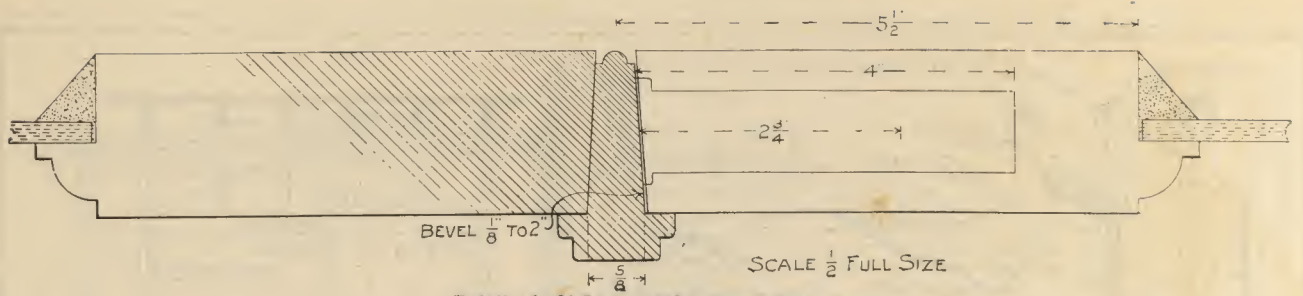
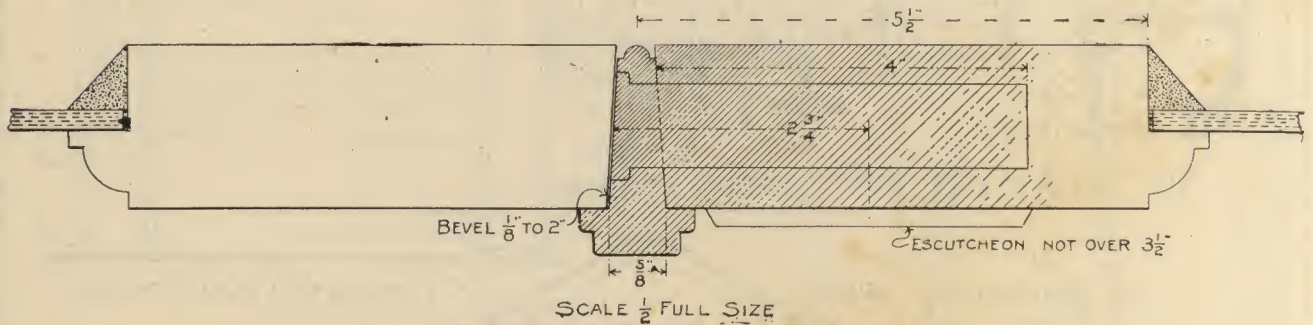
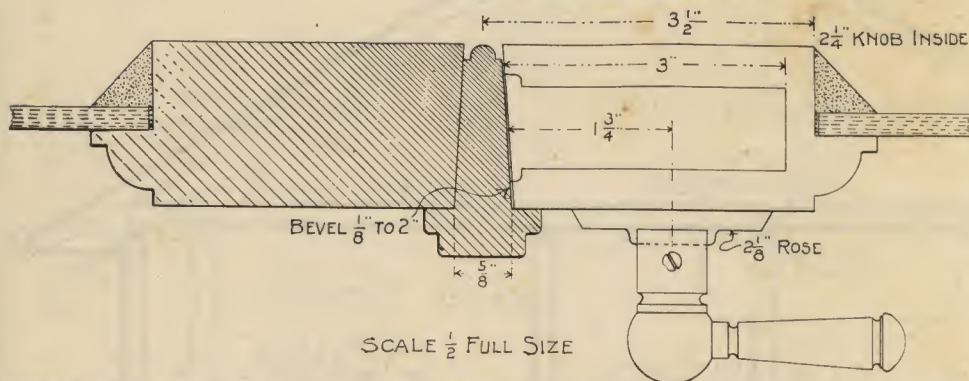
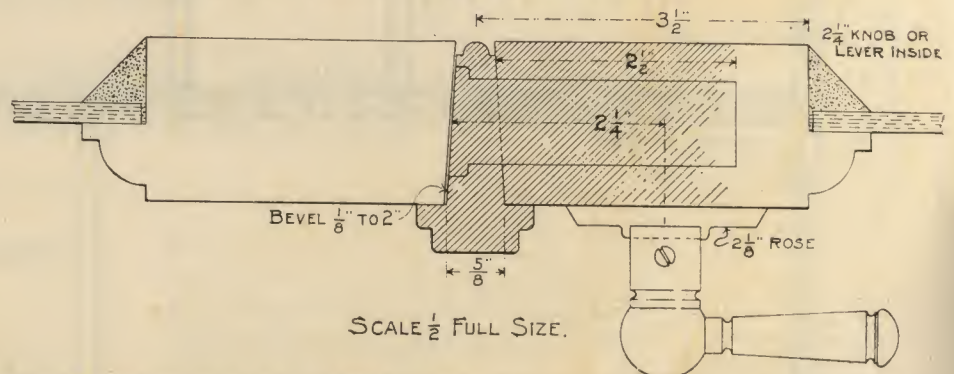
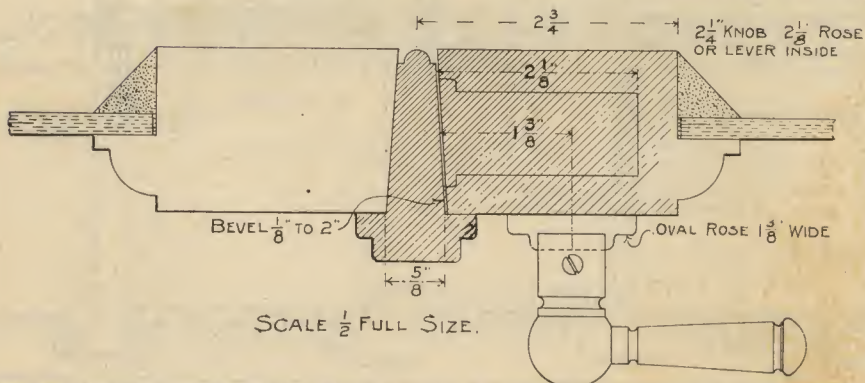
A SHEET 9 A DETAILS
SCALE 1" TO 3" EQUALS 1 FOOT



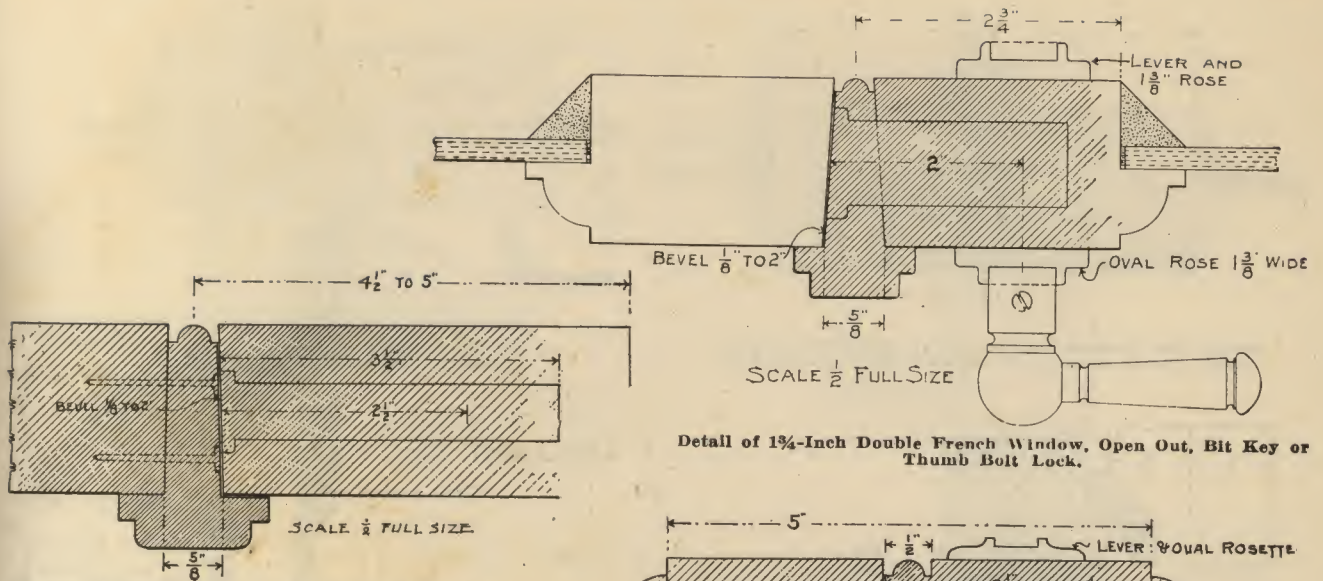


Construction Details of Modern Farm House of Frame.

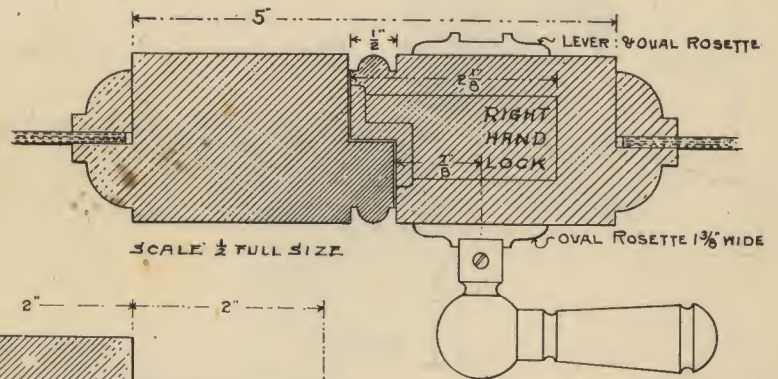
ARCHITECTURAL DETAILS

Detail of 1 $\frac{3}{4}$ -Inch Double Door, Open In.Detail of 1 $\frac{3}{4}$ -Inch Double Door, Open Out.Detail of 1 $\frac{3}{4}$ -Inch Double Door, Open In, on Which the Narrowest Cylinder Front Door Lock Can be Used.Detail of 1 $\frac{3}{4}$ -Inch Double Door, Open Out, on Which the Narrowest Cylinder Front Door Lock Can be Used.Detail of 1 $\frac{3}{4}$ -Inch Double French Window, Open In, Bit Key or Thumb Bolt Lock.

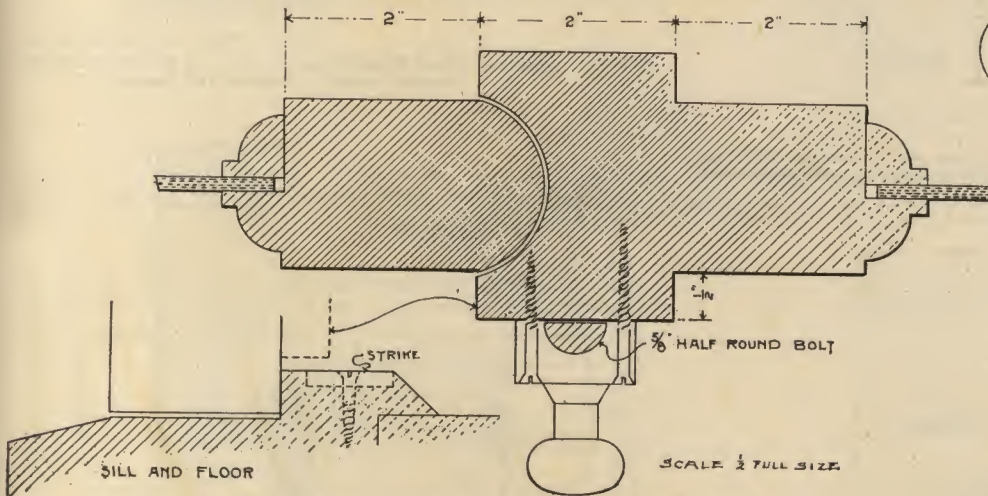
STANDARD DETAILS FOR BUILDERS' HARDWARE.



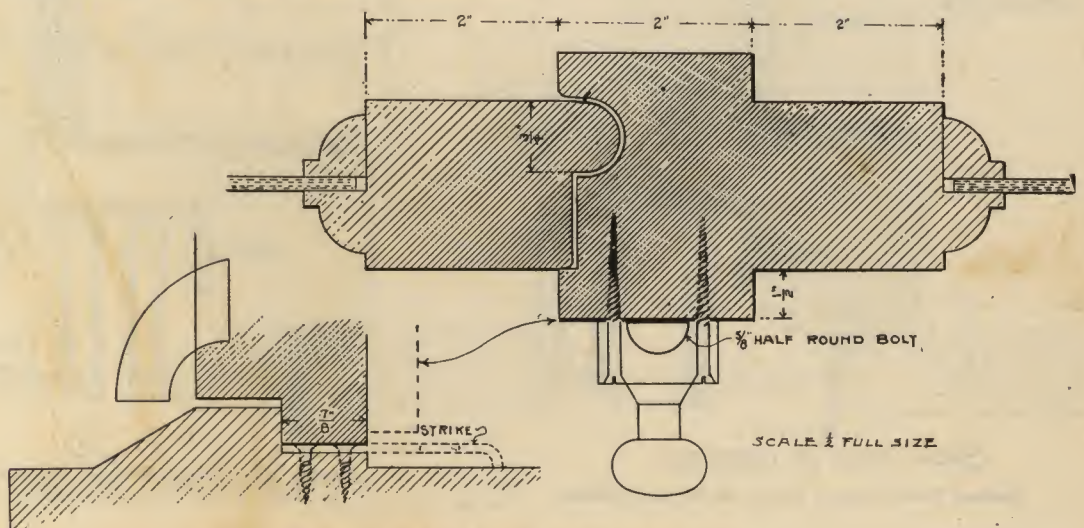
Detail of $1\frac{3}{4}$ -Inch Double Door on Which Regular $3\frac{1}{2}$ -Inch Inside Lock is Used.



Detail of $1\frac{3}{4}$ -Inch Double French Window Having Rabbeted Lock, with Bit Key or Thumb Bolt.

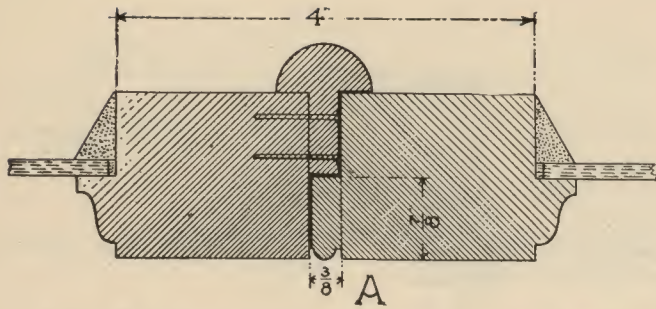


Detail of $1\frac{3}{4}$ -Inch Double French Window, Opening Out.

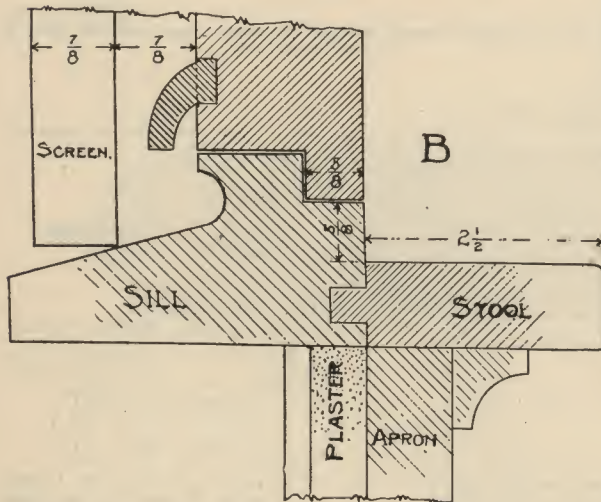


Detail of $1\frac{3}{4}$ -Inch Double French Window, Open In.

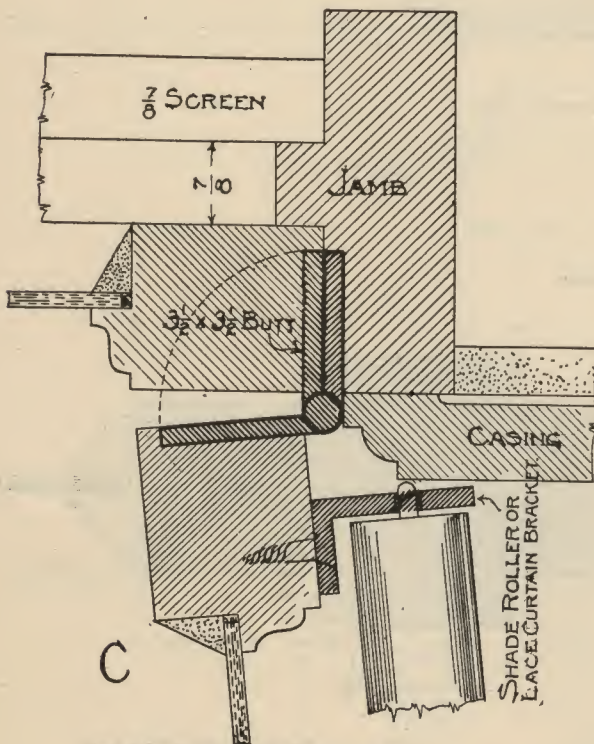
STANDARD DETAILS FOR BUILDERS' HARDWARE.



Section Thru Meeting Rails of Pair of Inward Opening Casements. Note T-Astragal on Outside to Keep Out the Rain.

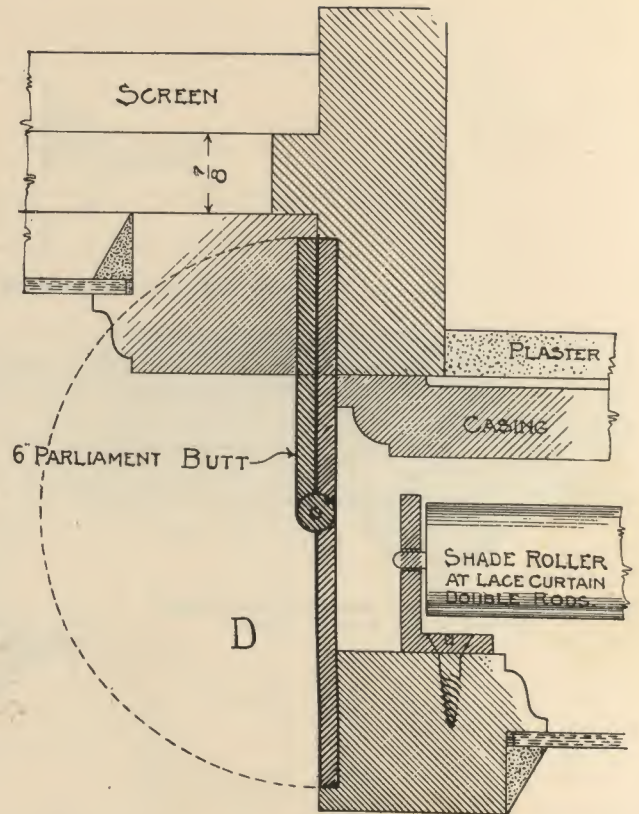


Section Thru Sill—Warranted Proof Even Against Driving Rain. Note That Standard Flush Bolt Requires Sill Rabbet to be at Least $\frac{7}{8}$ Inch.



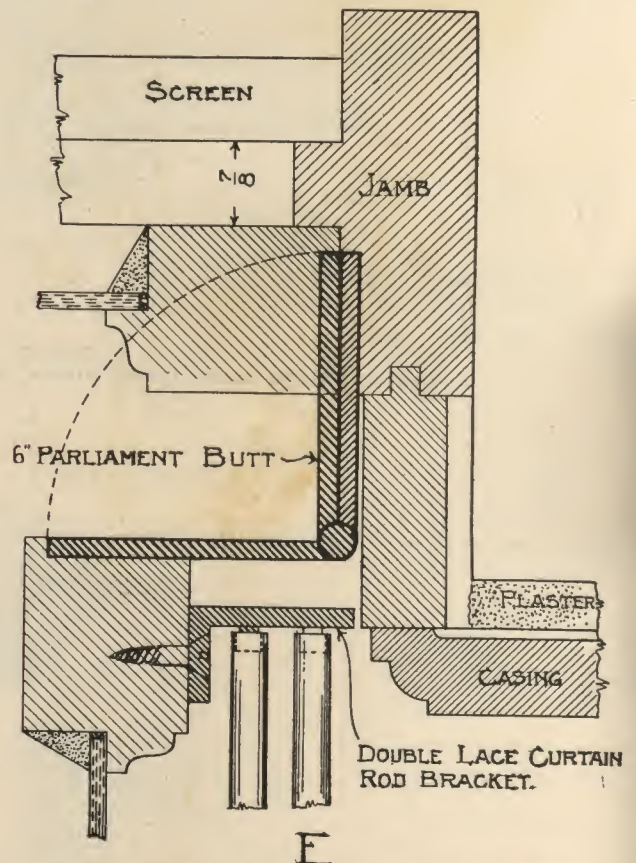
SASH OPEN 90 DEGREES.

Section Thru Window Jamb, Flush with Plaster.



SASH OPEN 180 DEGREES.

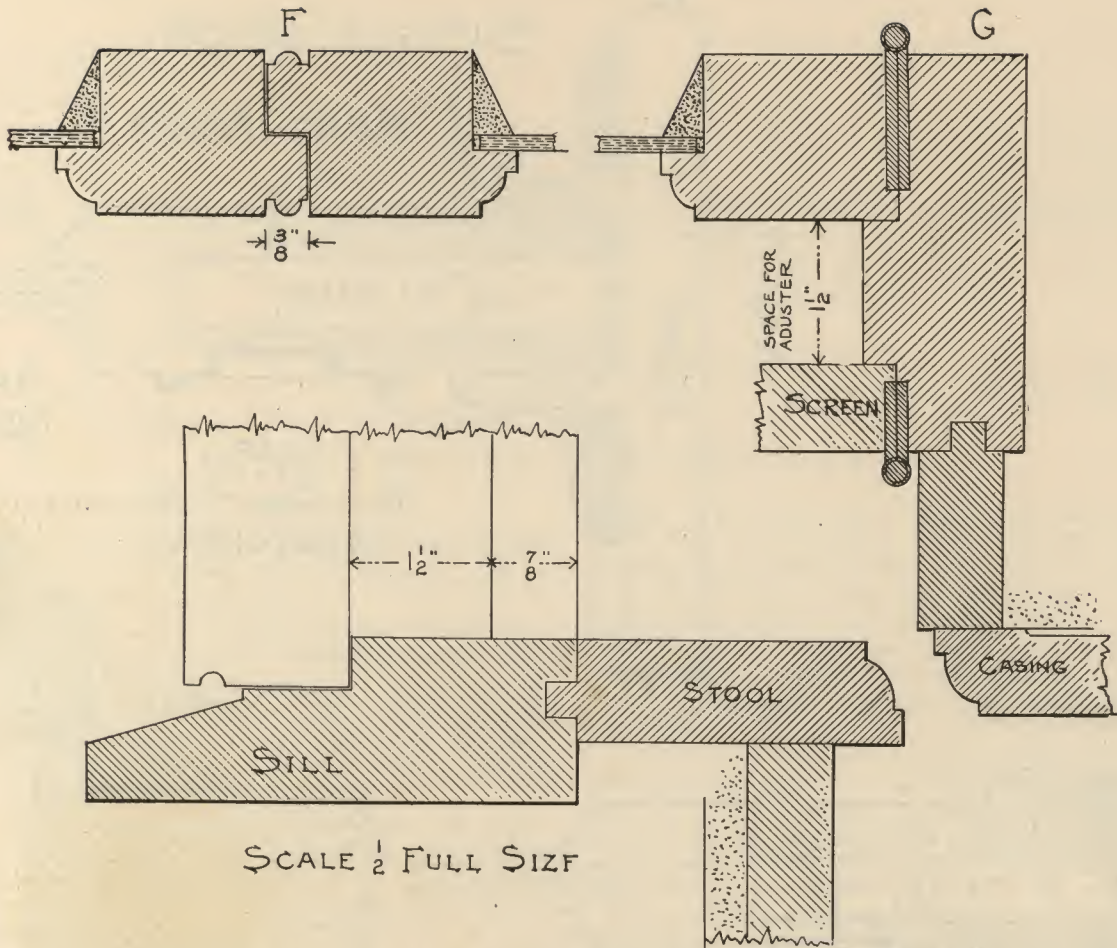
Section Thru Window Jamb—Use of 6-Inch Parliament Butts Permits Opening 180 Degrees.



Section Thru Recessed Jamb—Use of 6-Inch Parliament Butts Gives Room for Curtain Rod Brackets.

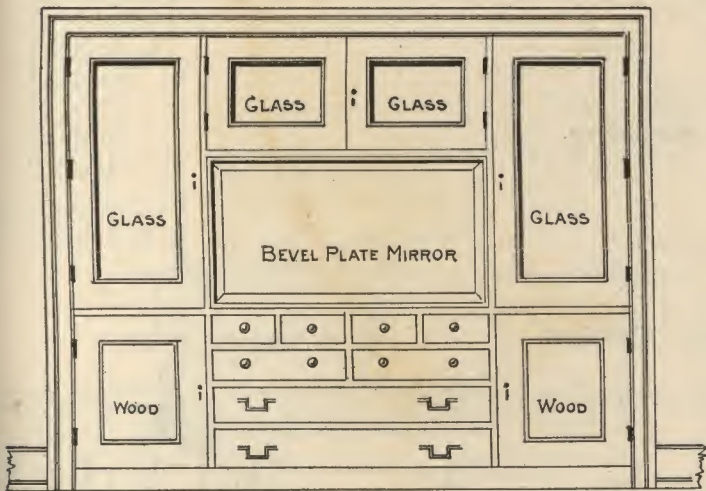
Details of Inward Opening Casements. All Details Half Full Size.

STANDARD DETAILS FOR BUILDERS' HARDWARE.

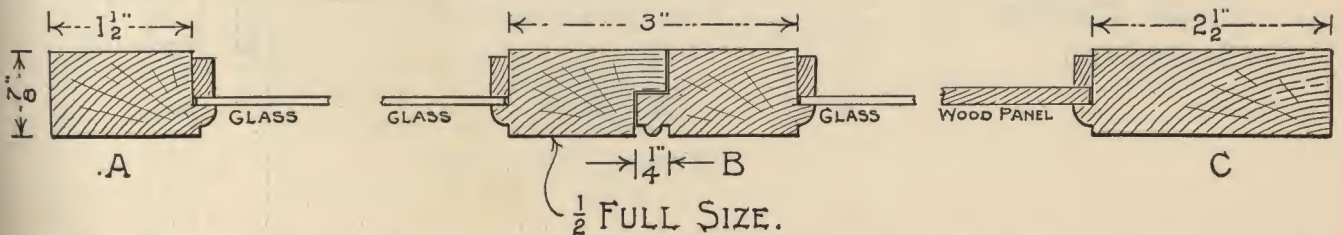


STANDARD DETAIL FOR OPEN OUT CASEMENT WINDOWS

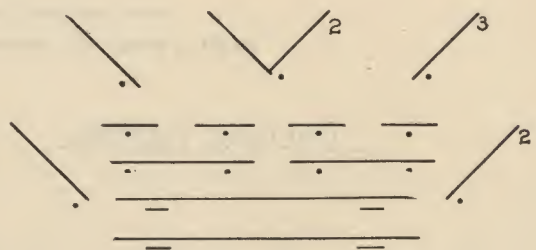
"F," Section Thru Meeting Rails of Double Casements, Showing $\frac{3}{8}$ -Inch Rabbit to Fit Standard Mortise Turn-buckle. "G," Section Thru Jamb, Showing $1\frac{1}{2}$ Inch Space Necessary for Standard Adjusters.

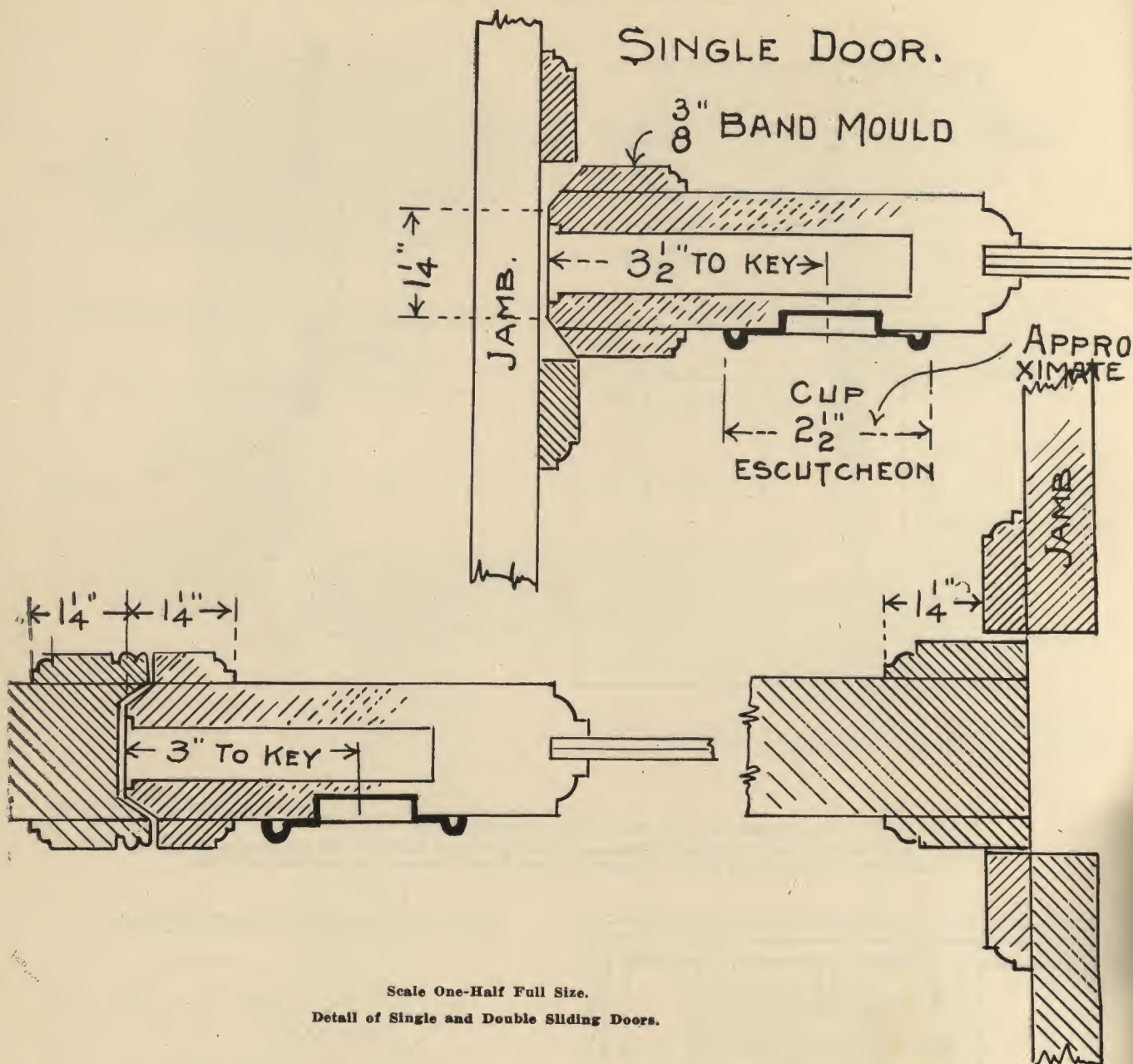


DETAIL No.16. SIDEBOARD.

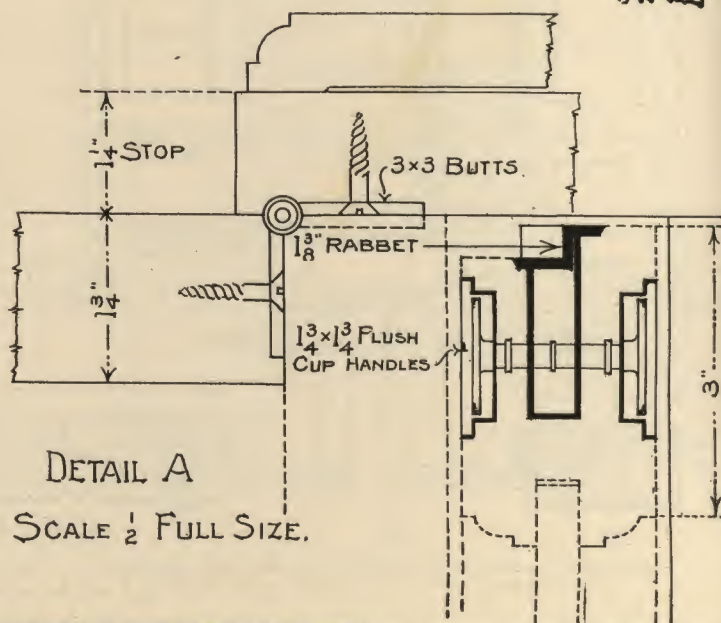
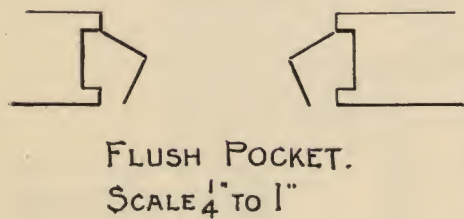


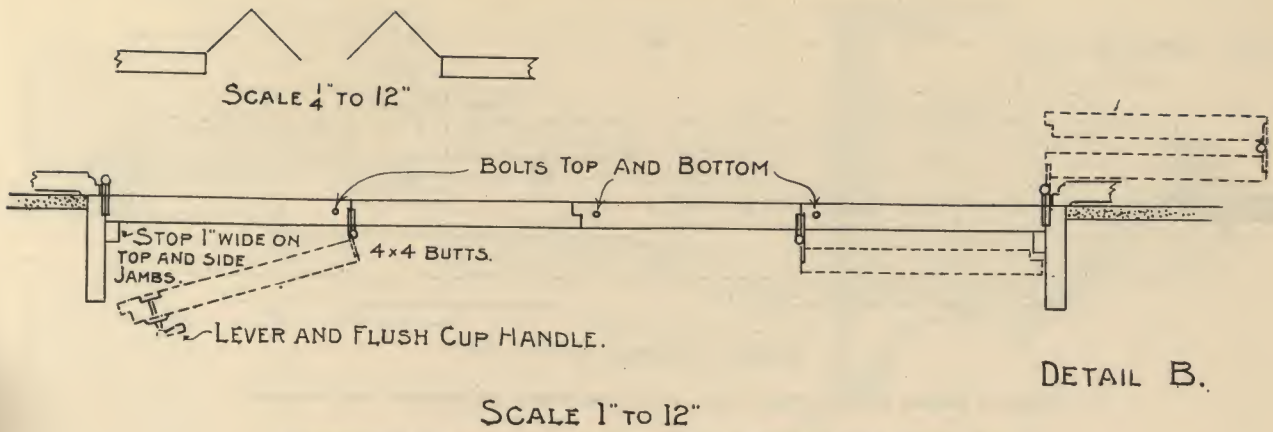
THE HARDWARE MAN'S FORM





FOLDING DOORS.





Arrangement for Accordion or Four Fold Doors Showing Only Proper Way.

Accordion Folding Doors

THERE is nothing in the building line which puzzles the millmen, the carpenter, and the hardware man so much as accordion folding partitions.

The manufacturers of accordion hangers should treat more fully on this subject. They should place in the hands of the architects full descriptive matter, also half size or full size drawings with hardware in place. Then the architects can show the carpenter how it is done and also show the hardware man what items he has to furnish to make a perfect workmanlike job.

Doors should never be made thinner than $1\frac{3}{4}$ inches, because a lock knob and flush cup handle cannot be applied in doors thinner than $1\frac{3}{4}$ inches.

The detail below shows six full width doors and two half width doors.

Here you have a sliding door proposition because the hanging of the doors forces you to it. You must supply a hanger for the door farthest from the half door, and a hanger for every second door from this.

You can readily see that the track is full width of the

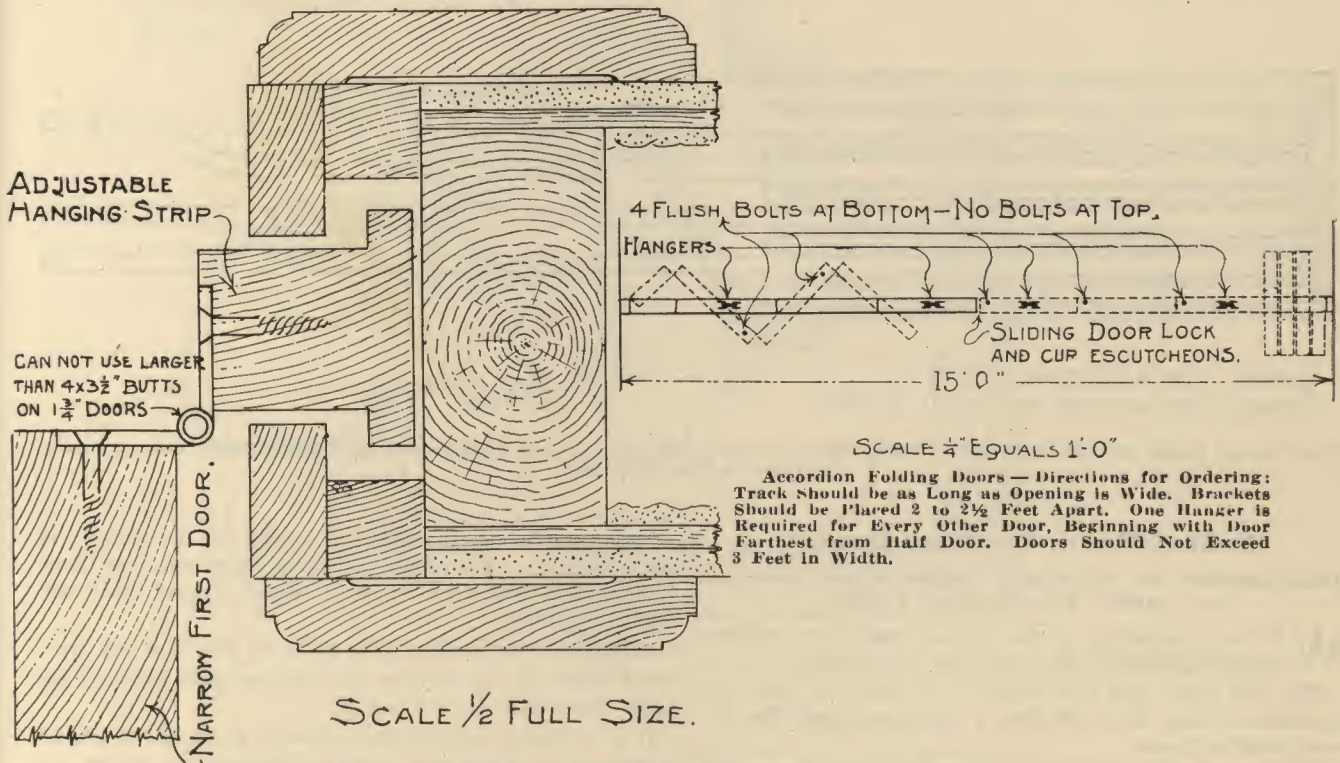
opening. You must use a sliding door lock with the regular flush cup escutcheons. You should use four flush extension bolts at the bottom. You cannot use flush bolts at the top because you cannot apply the strikes or keepers to the top jamb; *there is a slot in the top jamb.*

You can omit the use of the bottom bolts, but it is not good practice, because the doors will buckle and you have no other method of keeping the doors rigid at the bottom when same are closed.

If you wish to use eight full width doors and two half width doors you must use the same number of hangers as shown in the detail, but these two extra inner doors must be treated to operate same as regular pair of hinged doors with a soffit closing up the slot in the top jamb and bolts, lock, knob and flush cup handle.

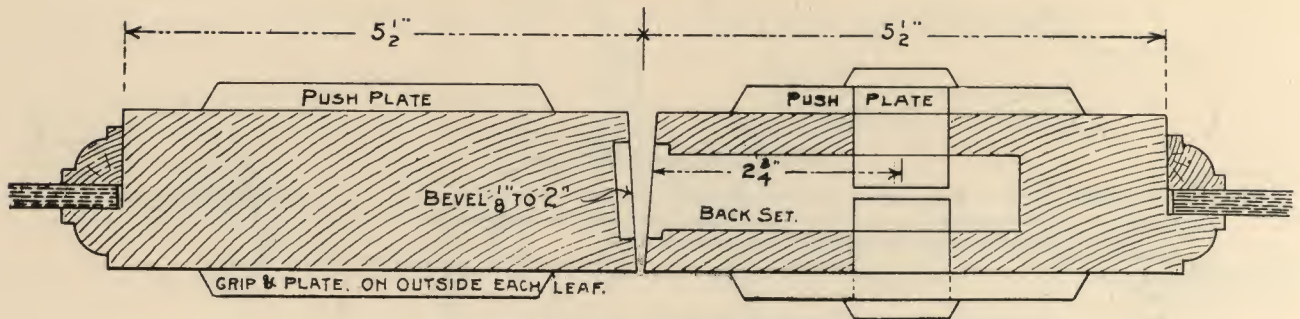
Now, to obtain a good workmanlike job of folding partition doors, the writer suggests the use of the adjustable hanging strip as shown in detail to left.

If the doors shrink the flush bolts can be shot into their keepers. All makers of hardware furnish keepers or strikes with oblong holes in them (because they know doors will shrink), hence the strikes or keepers need not be moved.



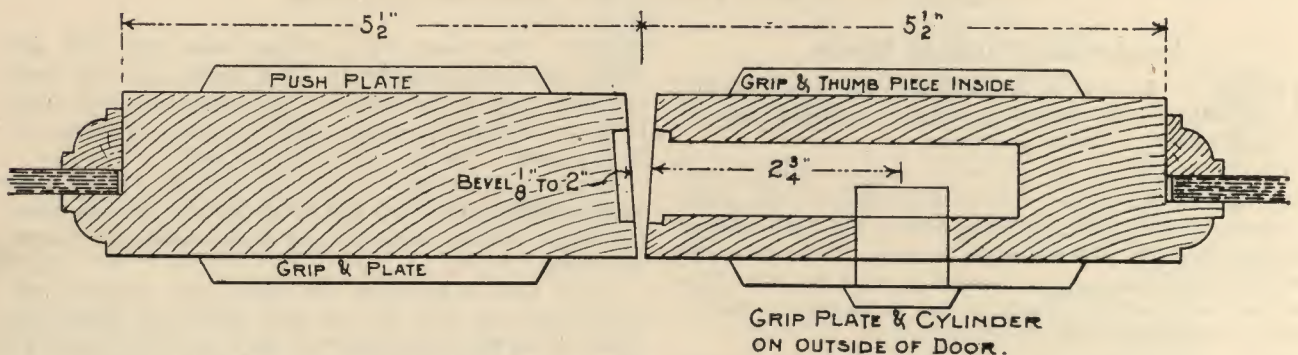
SCALE $\frac{1}{2}$ FULL SIZE.

Half Size Detail of the Narrow Door Attached to Adjustable Hanging Strip.

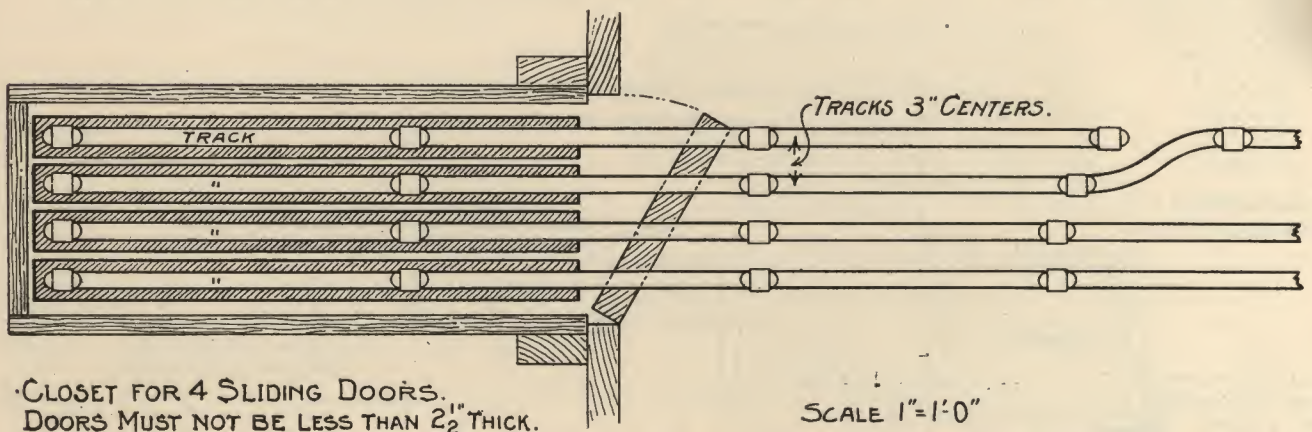
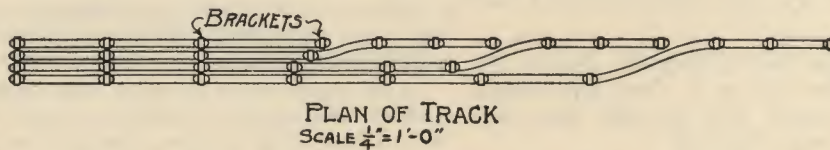


DOUBLE DOORS. OPEN OUT.

Detail of Double Doors to Open Out. Note That Edges Are Beveled, Not Rounded.



Detail of Double Doors to Open Out—for Schools, Churches, Theaters and Loft Buildings.



CLOSET FOR 4 SLIDING DOORS.
DOORS MUST NOT BE LESS THAN 2 1/2" THICK.

Plan View of Tracks for Four-Door School House Partition Heavy Enough to Carry Blackboard Panels; with Detail View of Pocket for Doors to Slide Back Into.

School-Room Partition Doors

ARRANGEMENT OF PARTITION DOORS HEAVY ENOUGH TO CARRY BLACKBOARD PANEL

WE show herewith, in the bottom detail, four sliding doors, all of which slide back into one pocket.

You will notice that this scheme is to take the place of accordion folding doors, dividing a large room into two or more smaller rooms.

This is especially desirable if these partition doors are required for additional blackboard space.

This device is in common use in the Chicago public

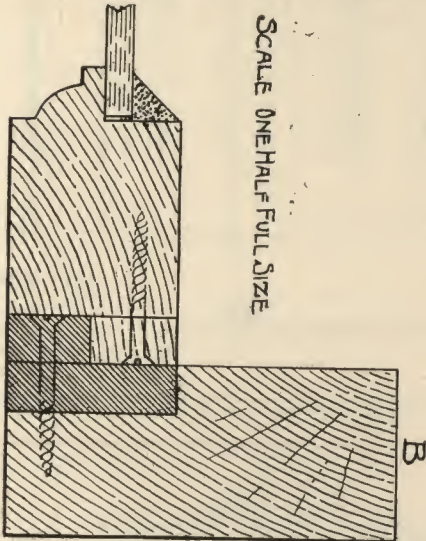
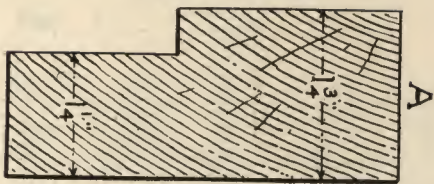
schools, and is being installed in many of the schools in the larger cities. The accordion folding doors are much lower in price; but price does not count when a perfect up-to-date device is wanted.

Any number of doors can be used. If you have the space for a pocket in the opposite wall you can slide some of the doors into same.

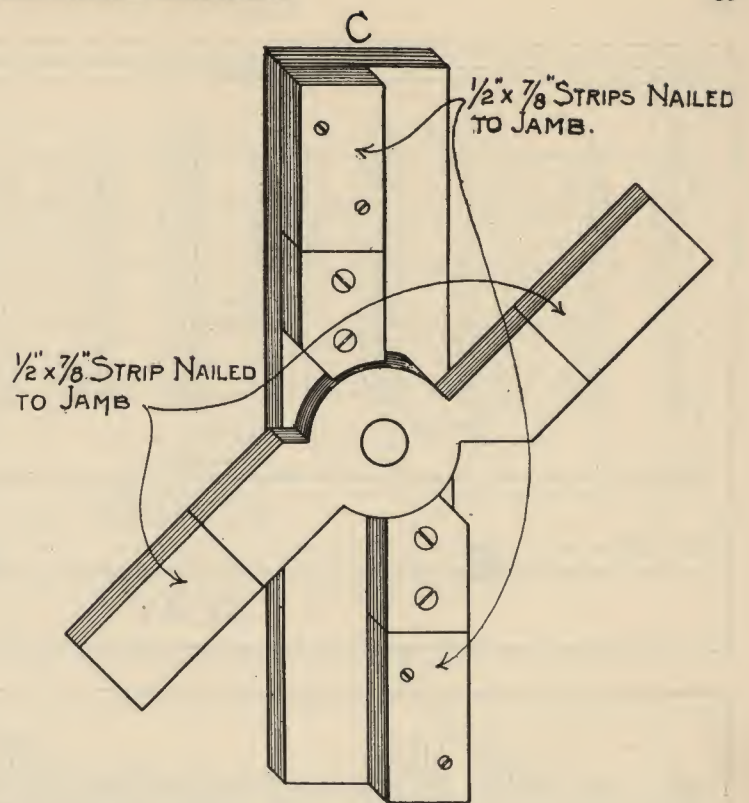
If it is desired to hide these doors, a panel can be placed in front of the doors when same are back into the pocket.

This panel can be hung on invisible hinges and a very satisfactory job is obtained.

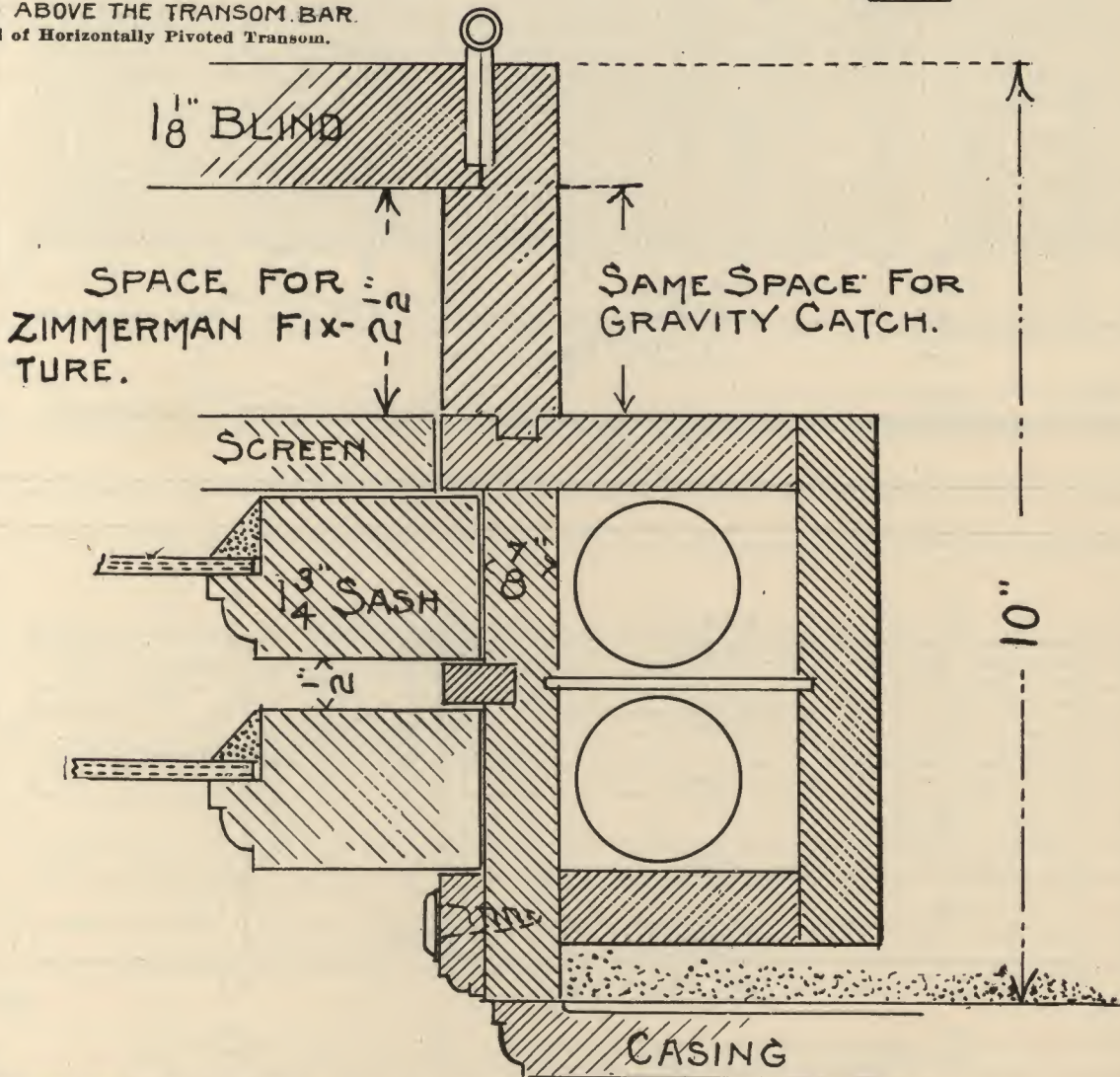
DOOR JAMB.



SCALE ONE-HALF FULL SIZE

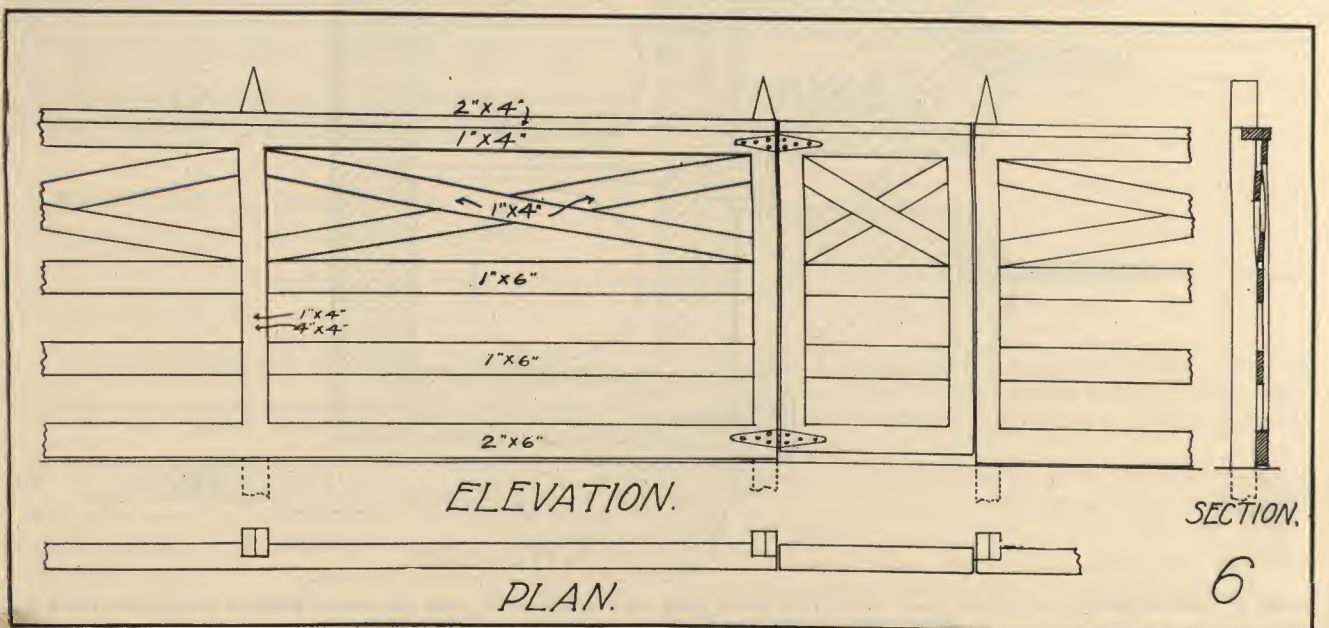
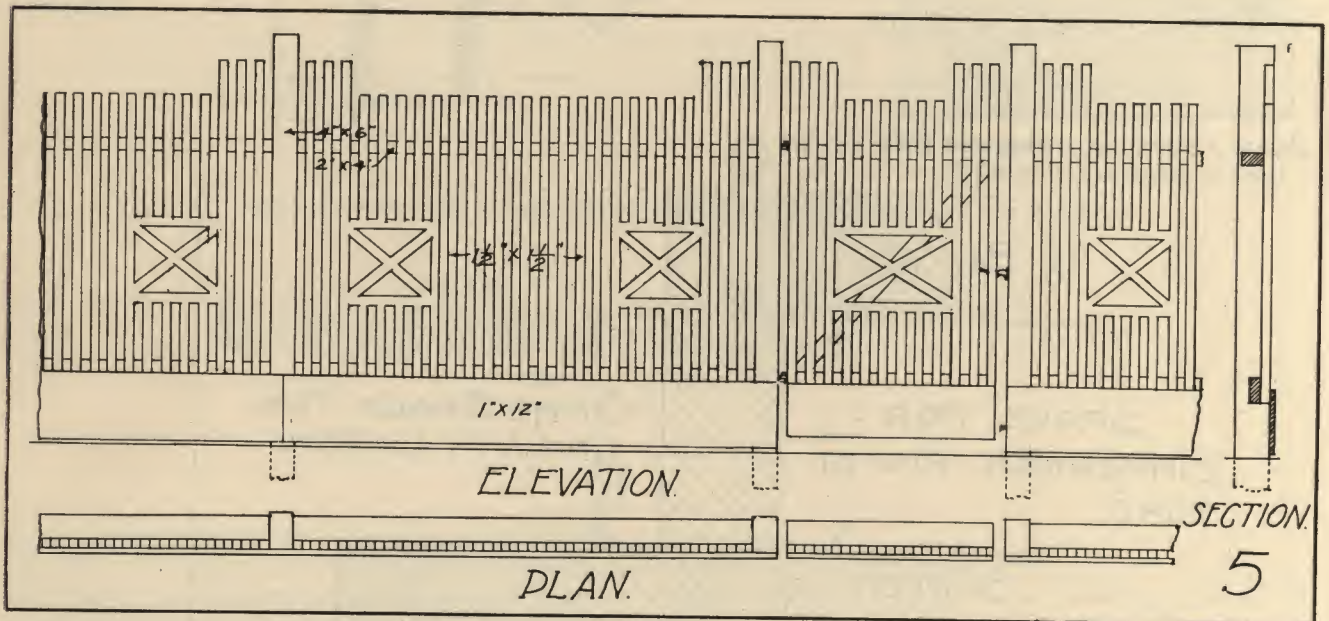
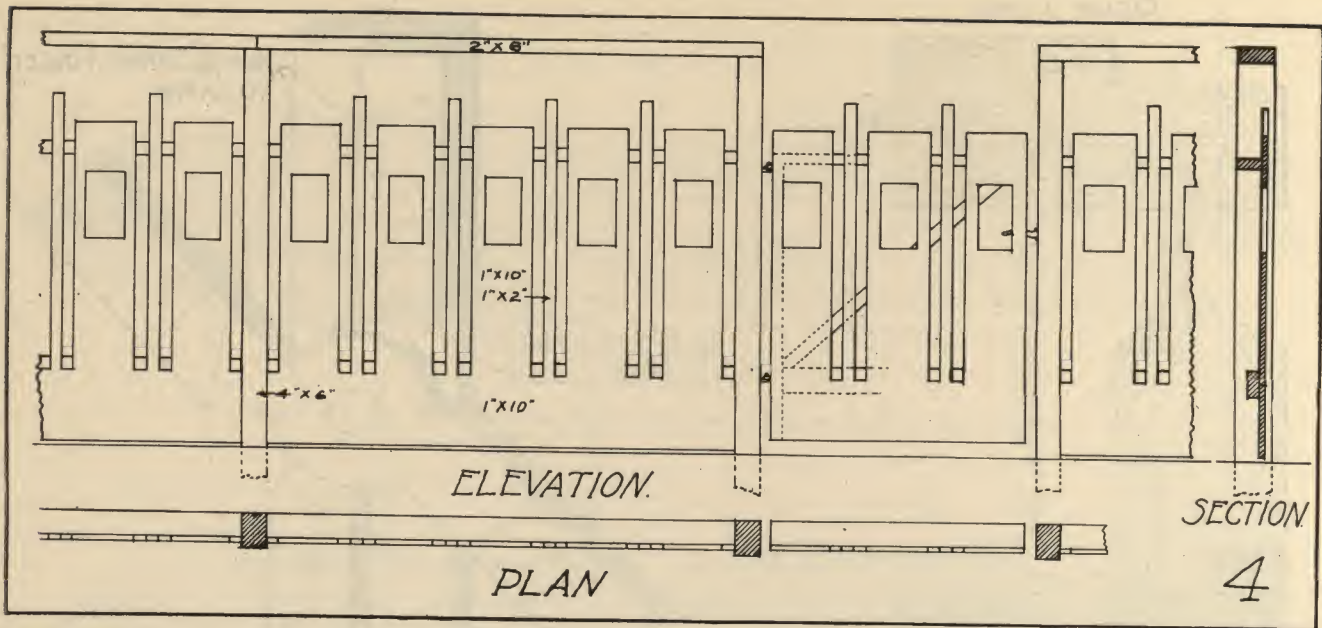


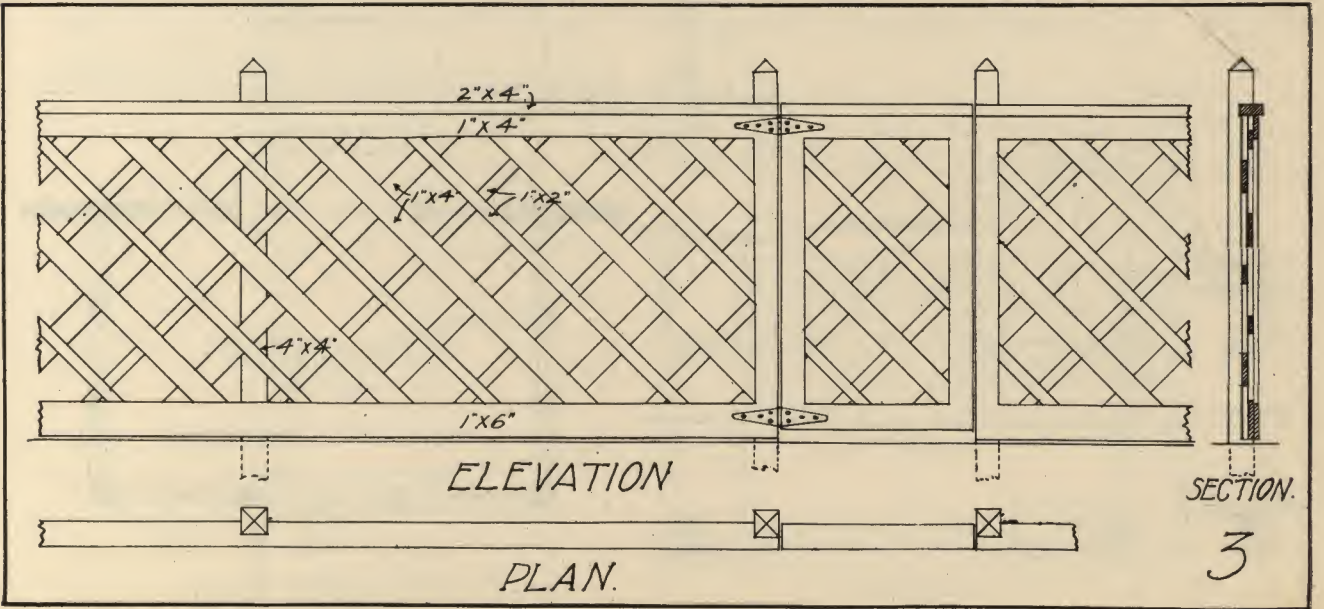
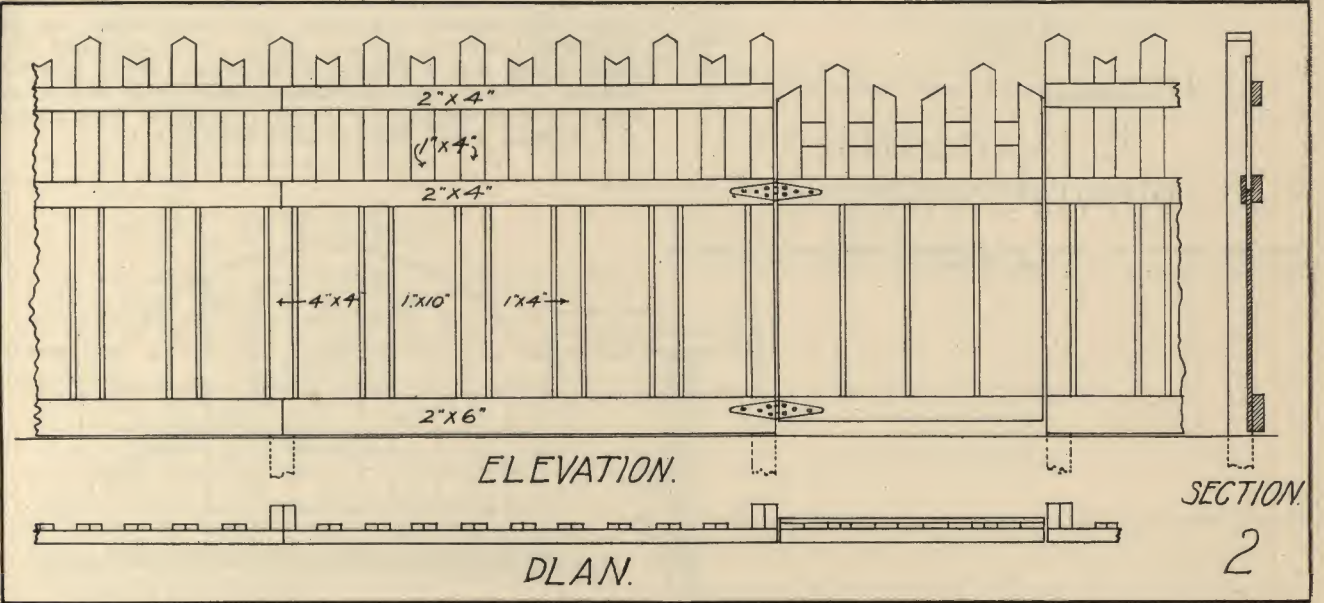
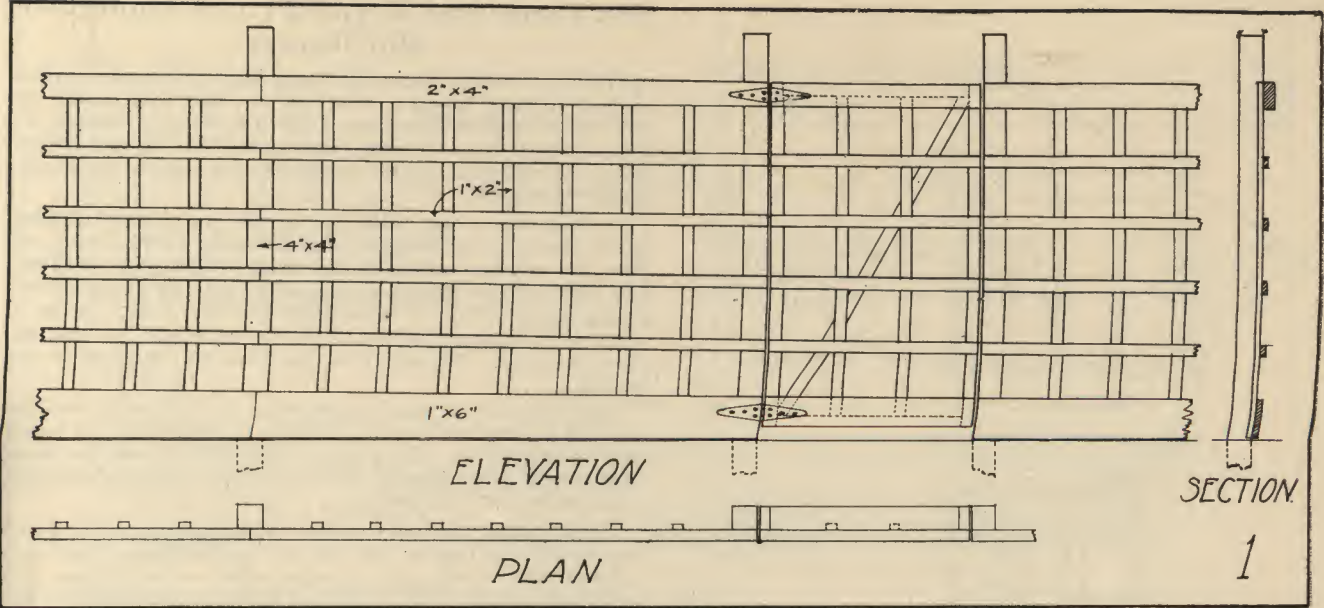
JAMB ABOVE THE TRANSOM BAR.
Detail of Horizontally Pivoted Transom.



Detail of Outside Blinds for 10-Inch Wall. Note That There Must be a Space of at Least $2\frac{1}{2}$ Inches Between Screen and Blind for Zimmerman or Gravity Fixtures; Scale One-Half Full Size.

STANDARD DETAILS FOR BUILDERS' HARDWARE.





Sun Parlor and Sleeping Porch Modernize Old Homes

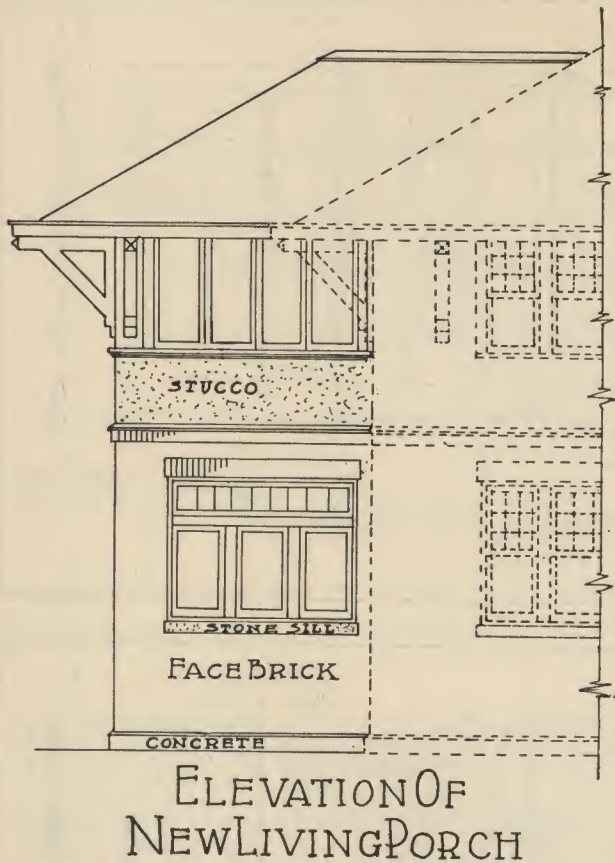
THERE are few houses that were built before sun parlors and sleeping porches came into demand that cannot be remodeled so as to have these modern features. The cost of the additional rooms is more than gained by the satisfaction they give the owner and the increase in the value of the house, should it be sold.

In designing a sun parlor, or a sun parlor and sleeping porch, first consider the type of architecture of the house and place the addition where it will most improve the dwelling. The addition here shown was placed at the side of the house, at the front. This is constructed of face brick, set on a concrete foundation, with a stucco strip below the sleeping porch windows. Details of the construction are given in the section.

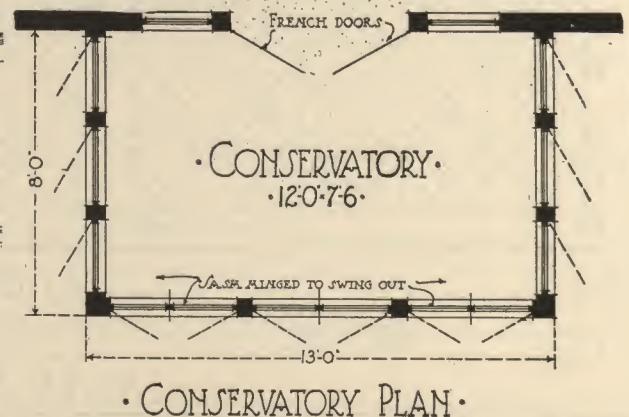
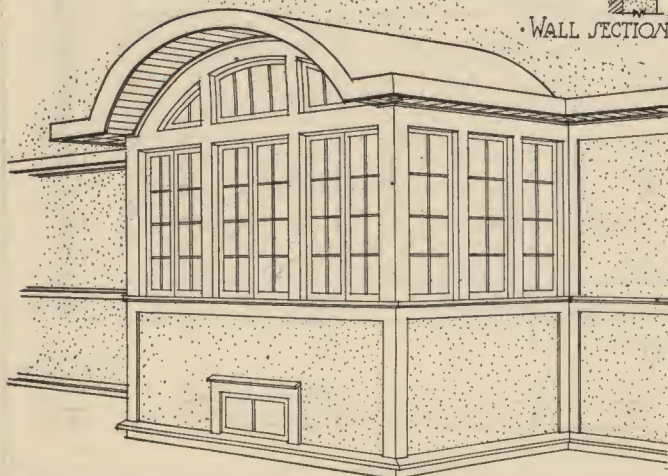
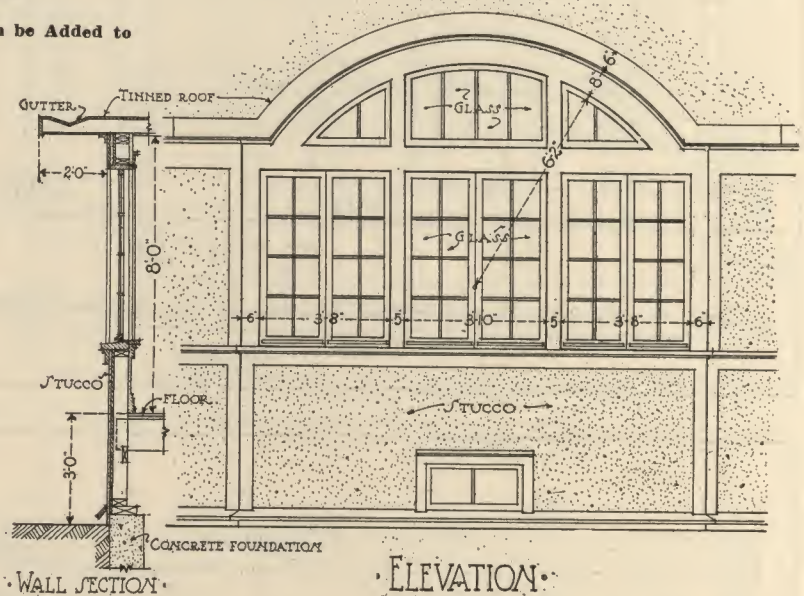
The floor plan of the sun parlor, or living porch, calls for a tile floor, but any material suitable or wanted by the owner can be substituted. The glazed doors leading from the living room to the porch also can be changed into any other desirable type, or left out altogether.

In this design the roof line was extended out over the porch to conform to that of the rest of the building. That is a feature that should not be overlooked—to so design and build the addition that it will not appear as an addition, but apparently will be a part of the original construction.

As has been said, this design is susceptible to many alterations. For instance, the living porch here shown can be transformed into an outdoor dining porch, adjoining the dining room, with a sleeping porch above. When such an addition is made, the construction will be more simple, as dining porches usually were merely screened in, being placed in a position where there is more privacy.

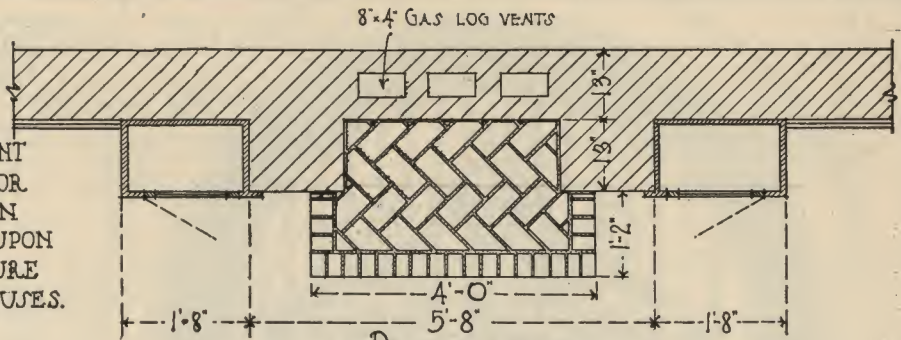


Showing How a Sun Parlor and Sleeping Porch Can be Added to Many Homes.



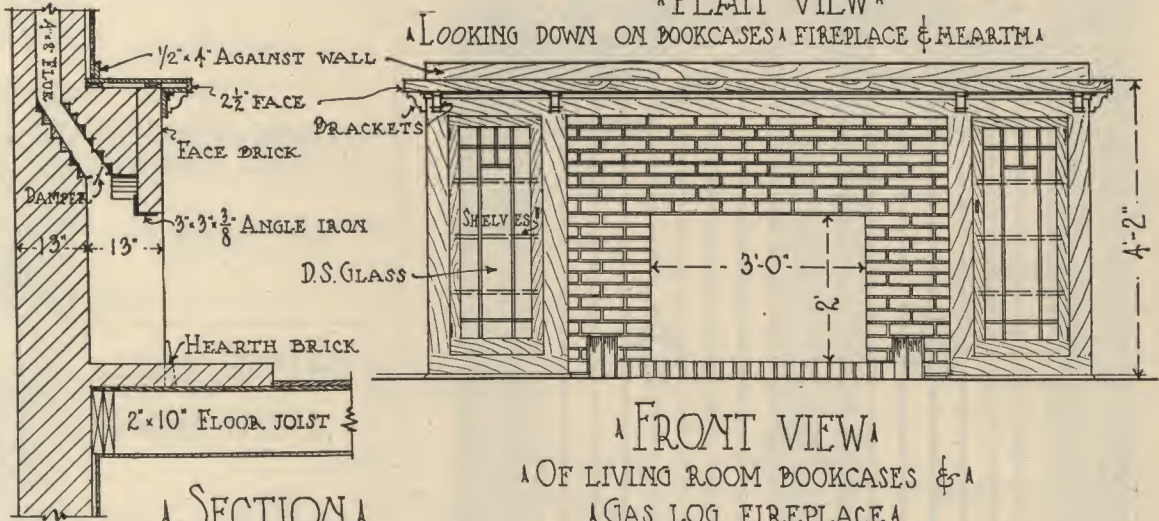
Perspective Sketch, Floor Plan and Details of an Artistic Sun Parlor or Conservatory Addition to be Built onto a Stucco House

NOTE: THIS TYPE OF GAS LOG FIREPLACE & BOOKCASE COMBINATION IS VERY MUCH USED IN APARTMENT HOUSE CONSTRUCTION; FOR ECONOMY IN CONSTRUCTION IT CANNOT BE IMPROVED UPON FOR A LIVING ROOM FIXTURE IN MODERN APARTMENT HOUSES.



PLAN VIEW

LOOKING DOWN ON BOOKCASES, FIREPLACE & HEARTH

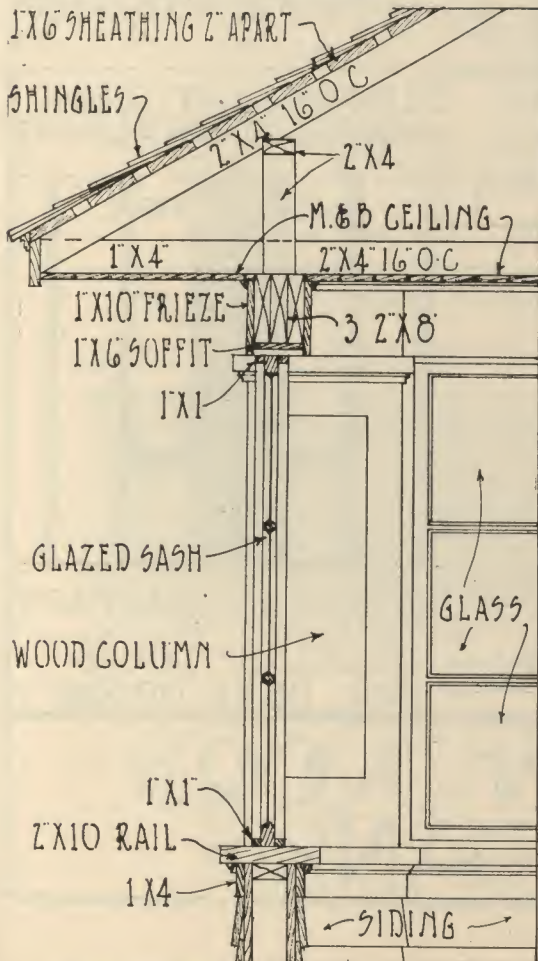


FRONT VIEW

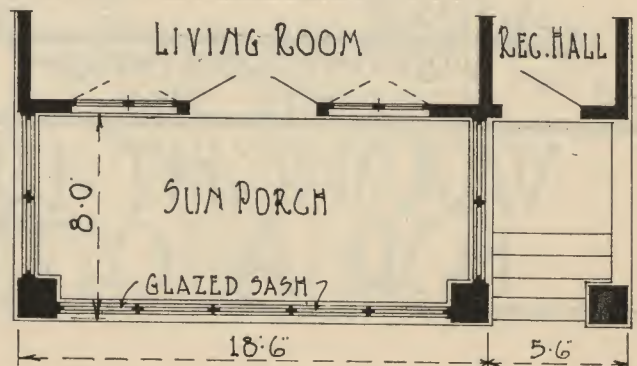
OF LIVING ROOM BOOKCASES &

GAS LOG FIREPLACE

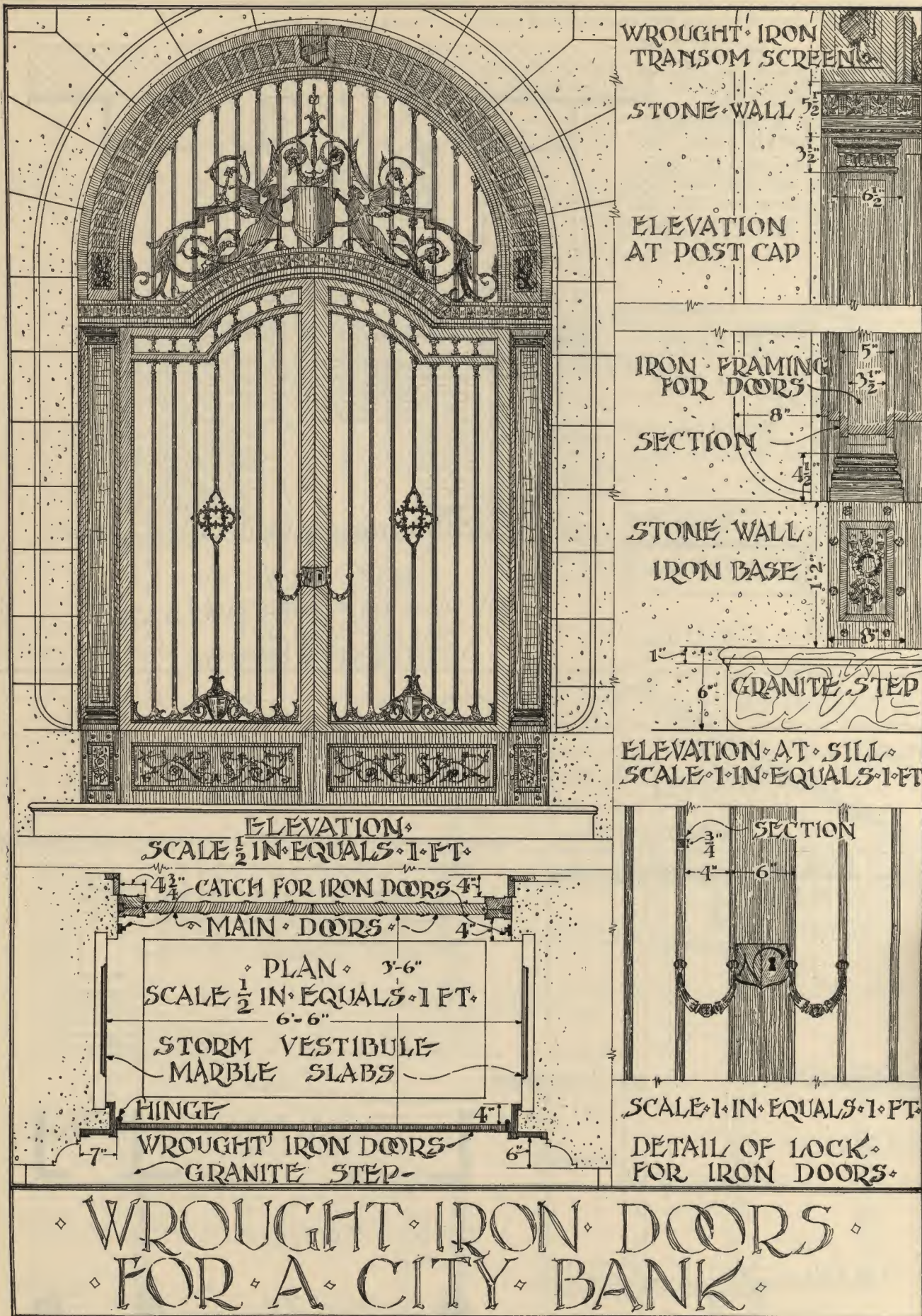
SCALE 3/8" EQUALS 1 FOOT

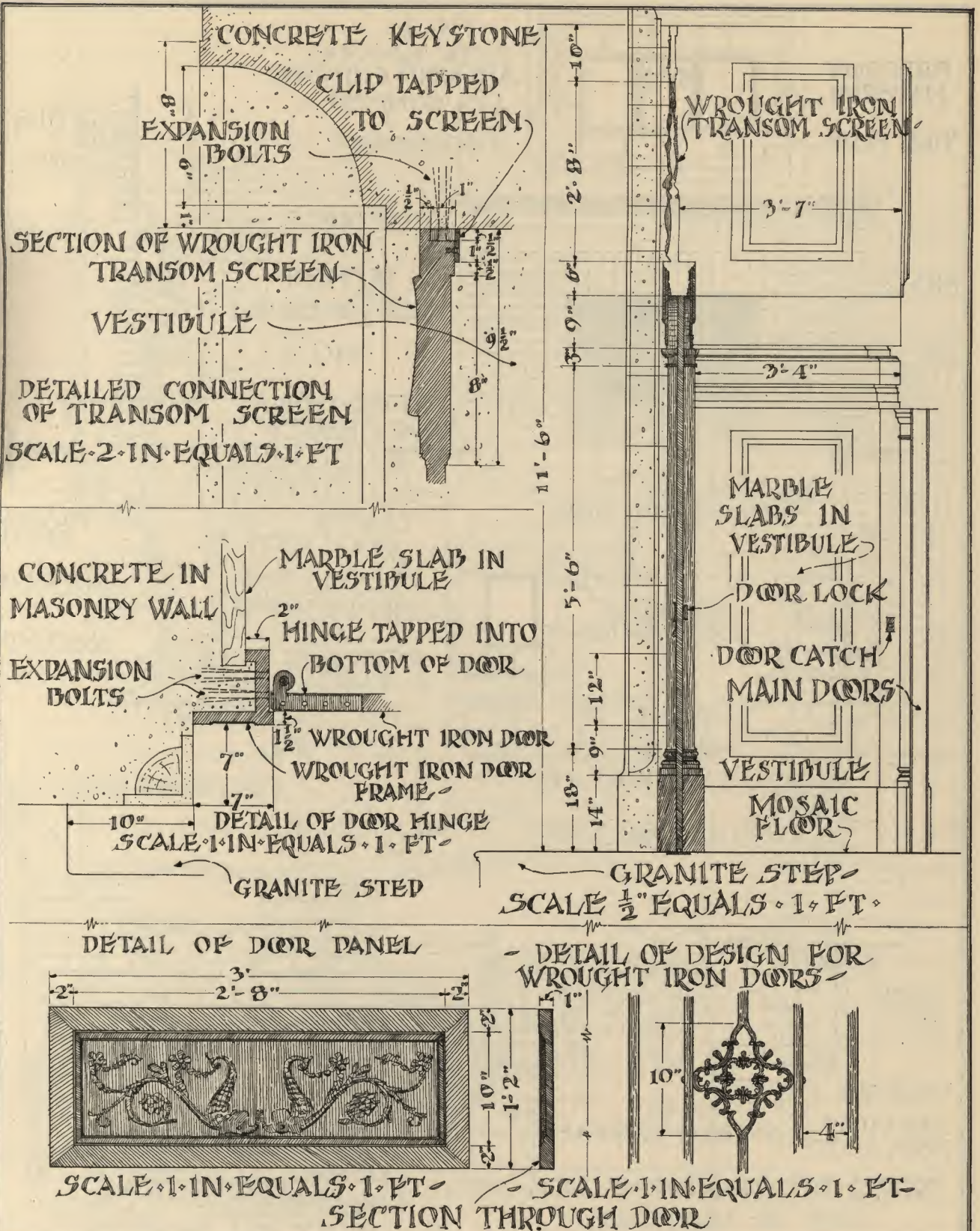


ELEVATION

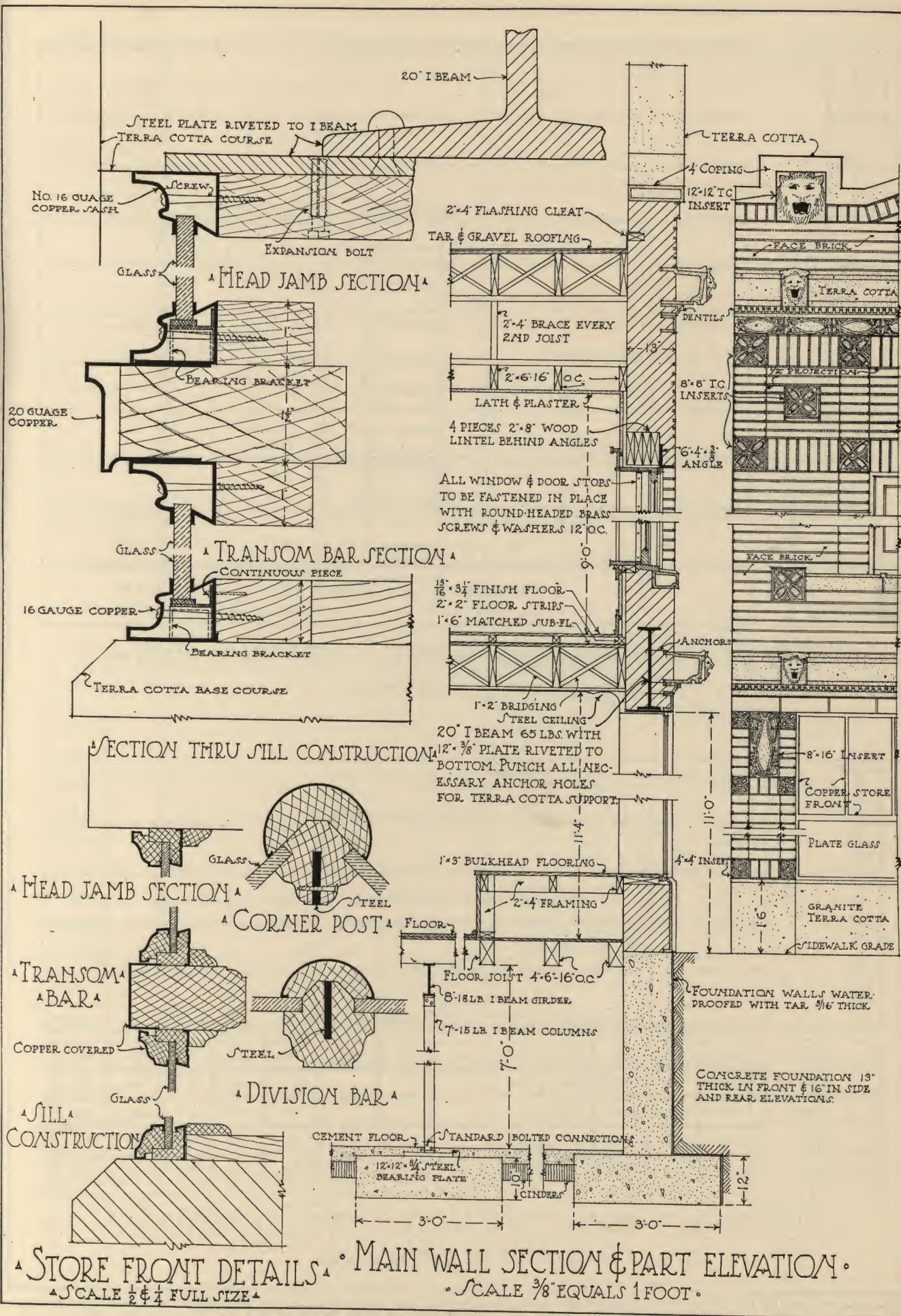


Details of Enclosed Porch and Separate Entry with French Doors and Cement Windows Between Porch and Living Room.

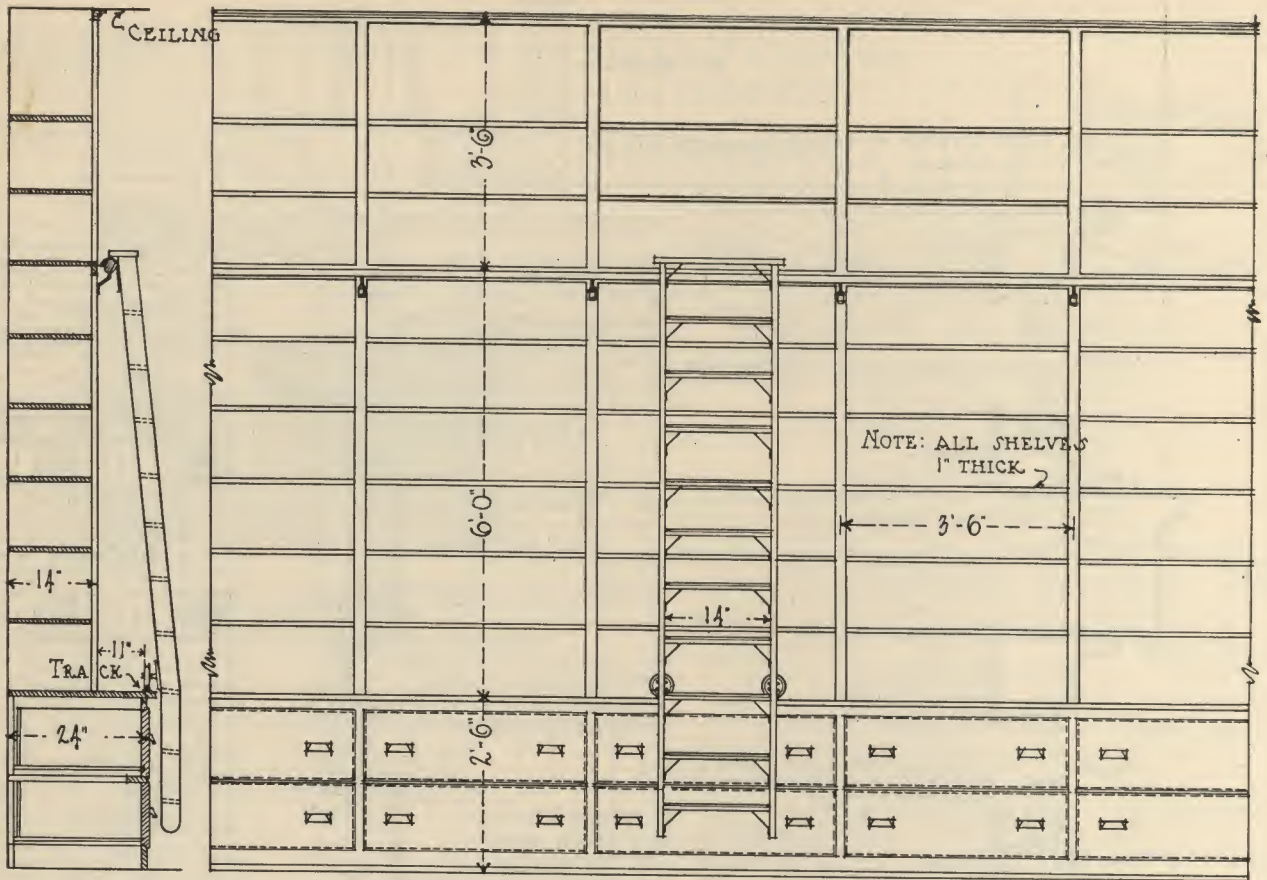




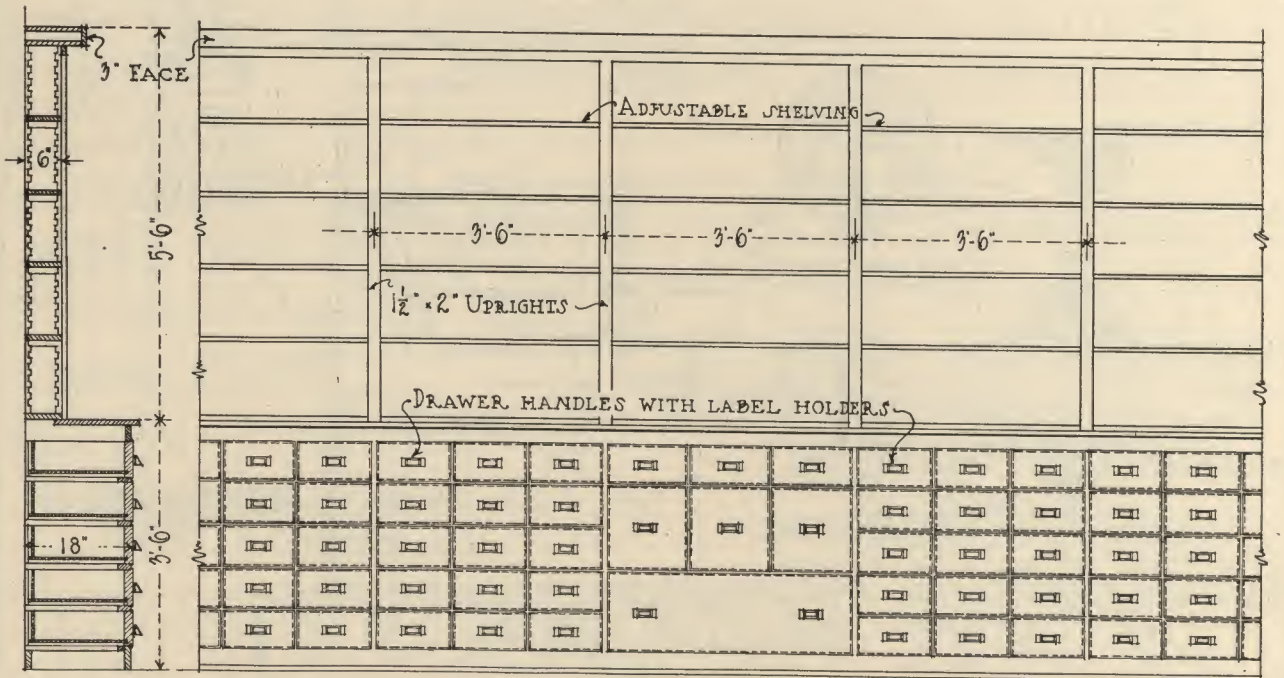
WROUGHT IRON DOORS FOR A CITY BANK



Show Window and Front Wall Construction of Store Building.

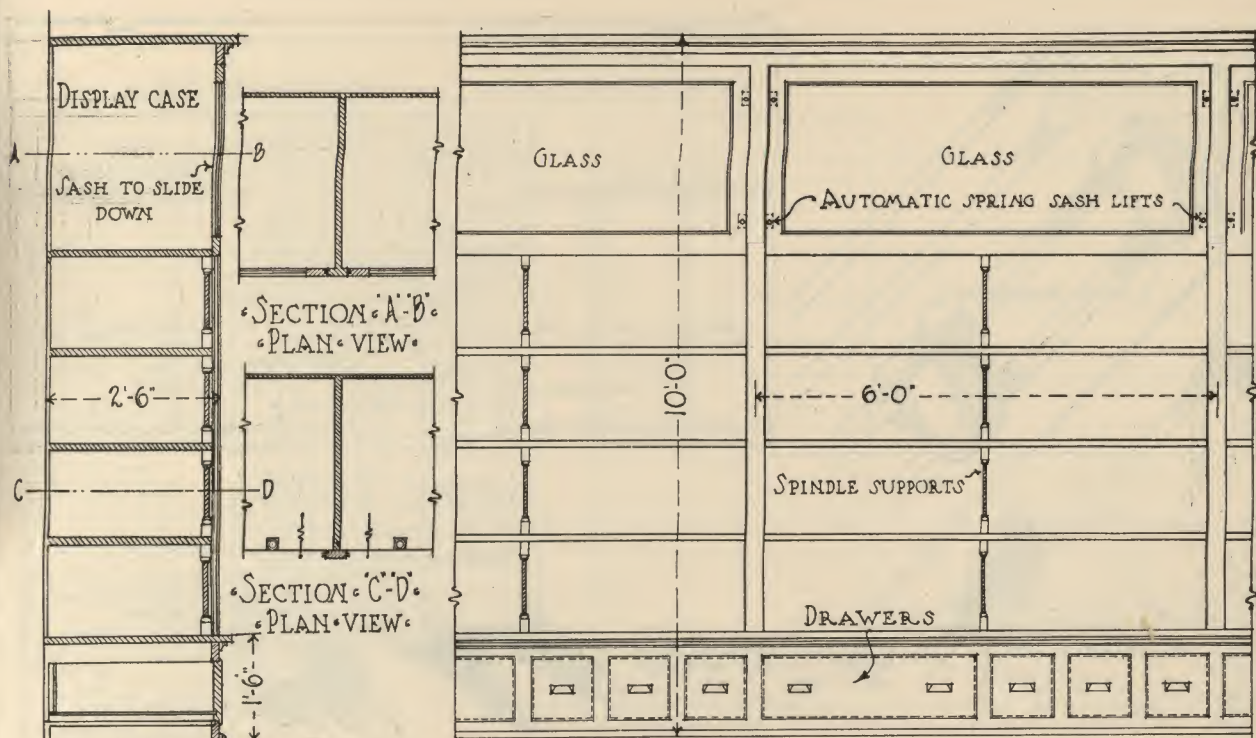


SECTION AND ELEVATION OF SHOE STORE SHELVING.
 SCALE: $\frac{3}{8}$ INCH EQUALS ONE FOOT.

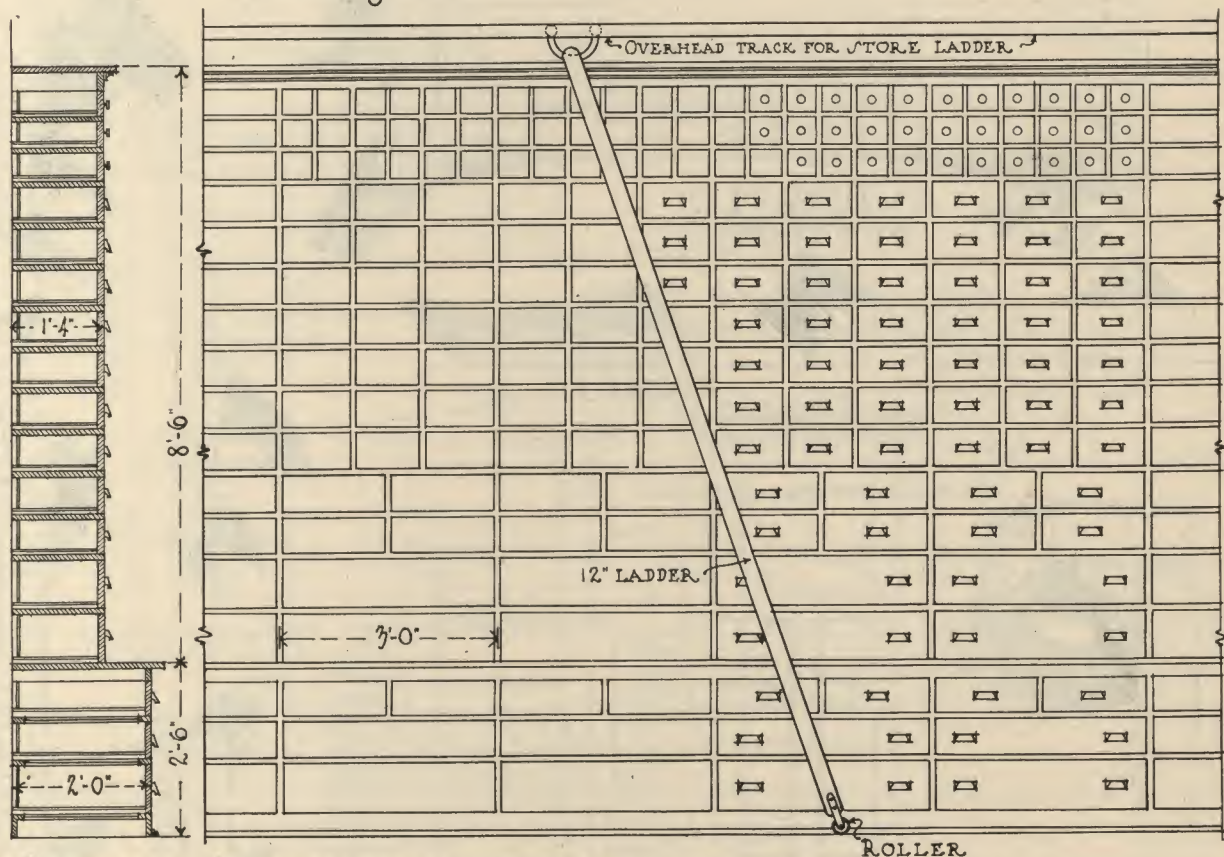


SECTION AND ELEVATION OF DRUG STORE FIXTURES.
 SCALE: $\frac{3}{8}$ INCH EQUALS ONE FOOT.

Details of Shelves and Fixtures Suitable for Shoe Stores and Drug Stores. The Ladder Construction for Handling the Shoe Store Shelving is a Feature. The Drug Store Design is a Standard Design Such as Might Be Found in a Well Arranged Drug Store.

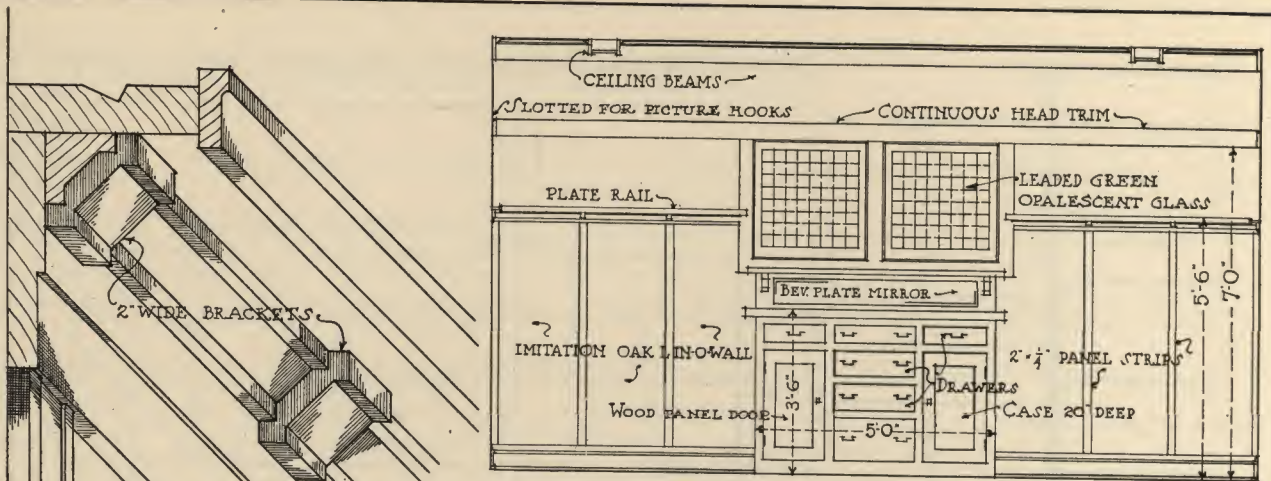


SECTION & ELEVATION OF DRY GOODS STORE FIXTURES.
SCALE $\frac{3}{8}$ INCH EQUALS ONE FOOT.



SECTION & ELEVATION OF HARDWARE STORE FIXTURES.
SCALE $\frac{3}{8}$ INCH EQUALS ONE FOOT.

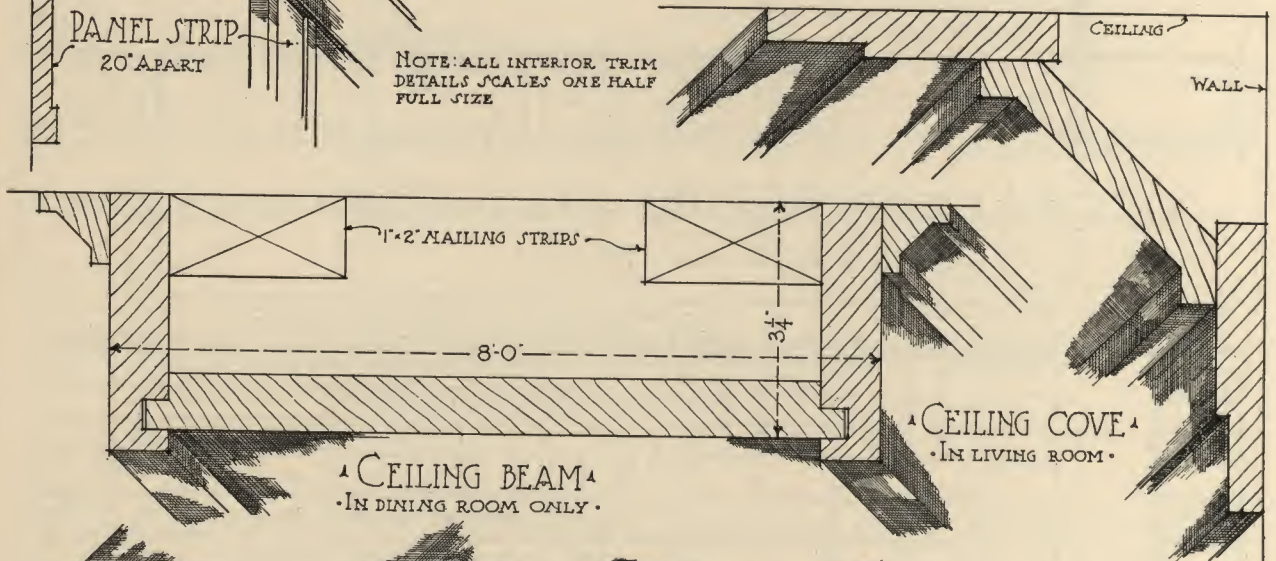
Shelves and Fixture Arrangements for a Modern Dry Goods Store and a Hardware Store. The Small Labeled Drawers Are the Most Useful for a Hardware Store. The Broad Shelves for the Dry Goods Do Not Need to Be Marked as the Material Can Be Easily Seen.



▲ DINING ROOM ▲
• LOOKING TOWARD BUFFET •
• SCALE $\frac{1}{4}$ " EQUALS 1 FOOT •

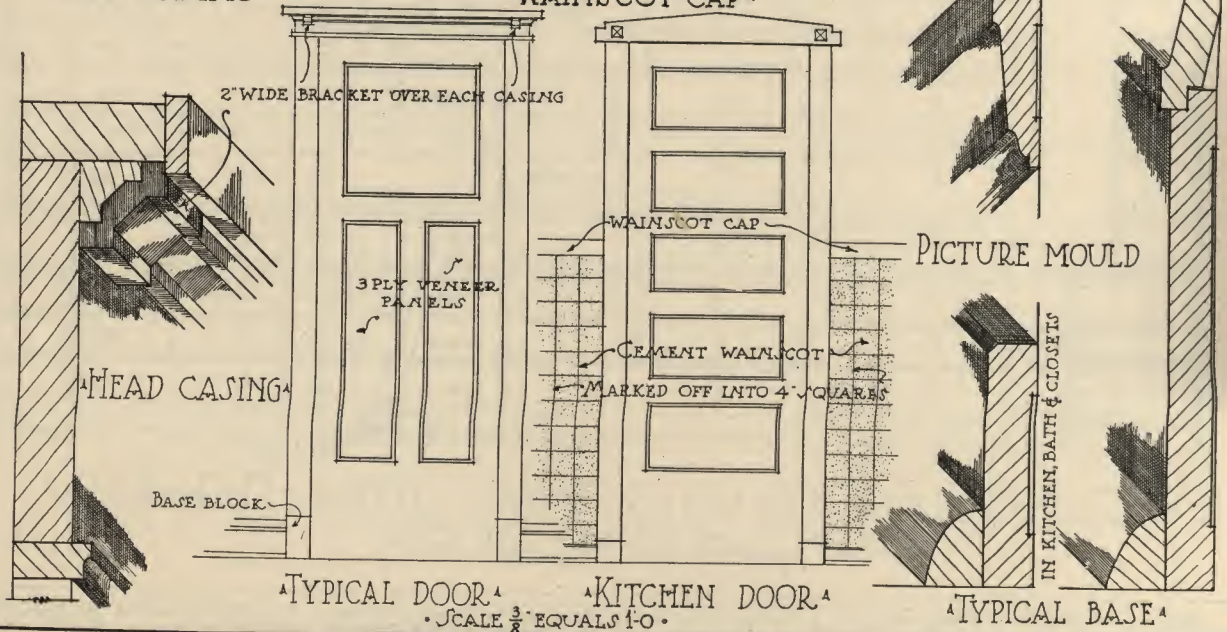
PANEL STRIP
20" APART

NOTE: ALL INTERIOR TRIM
DETAILS SCALES ONE HALF
FULL SIZE

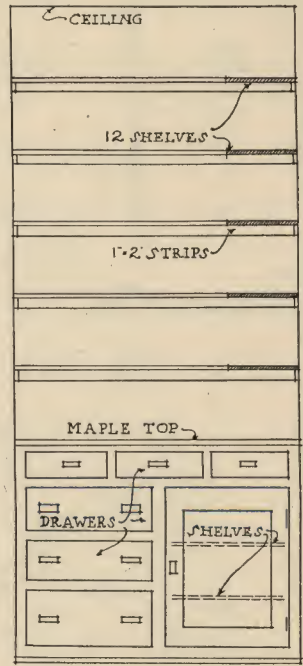
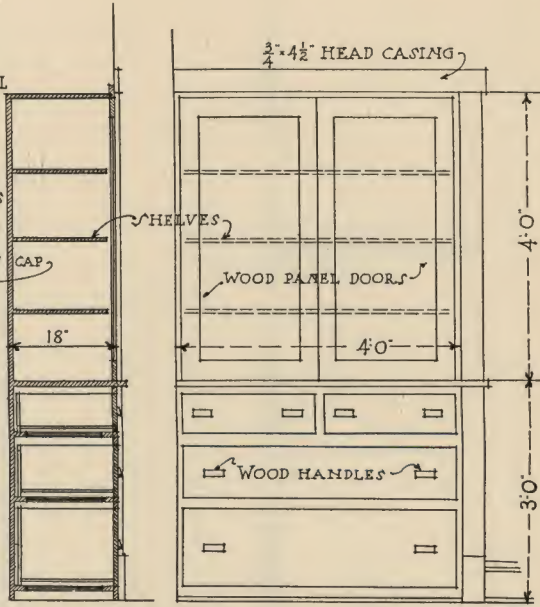
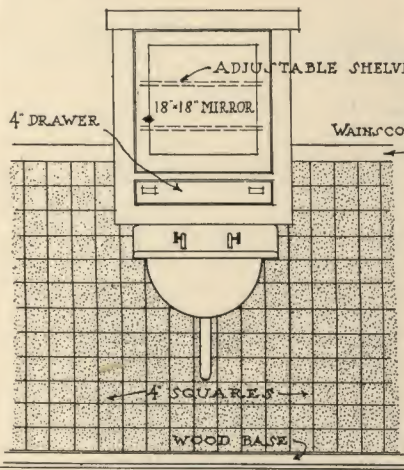


▲ SIDE CASING ▲

▲ WAINSCOT CAP ▲



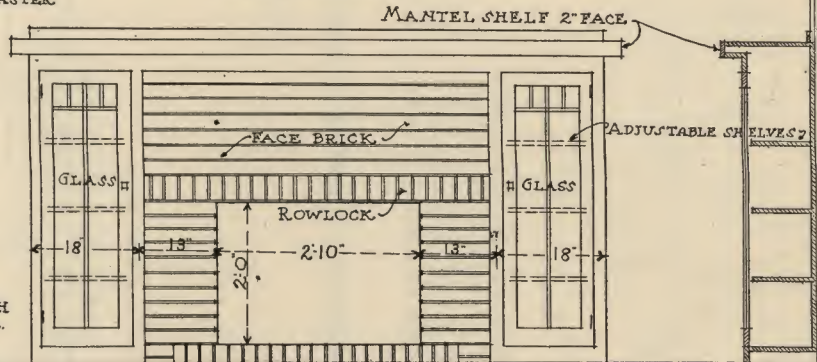
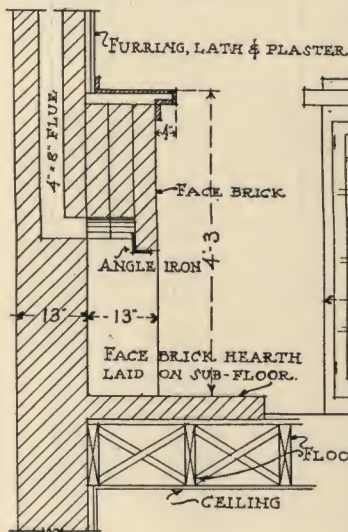
NOTE: ALL PLASTERED WALLS AND
CEILING INCLUDING WOODWORK
TO BE FINISHED WITH WHITE ENAMEL
IN BATH ROOM



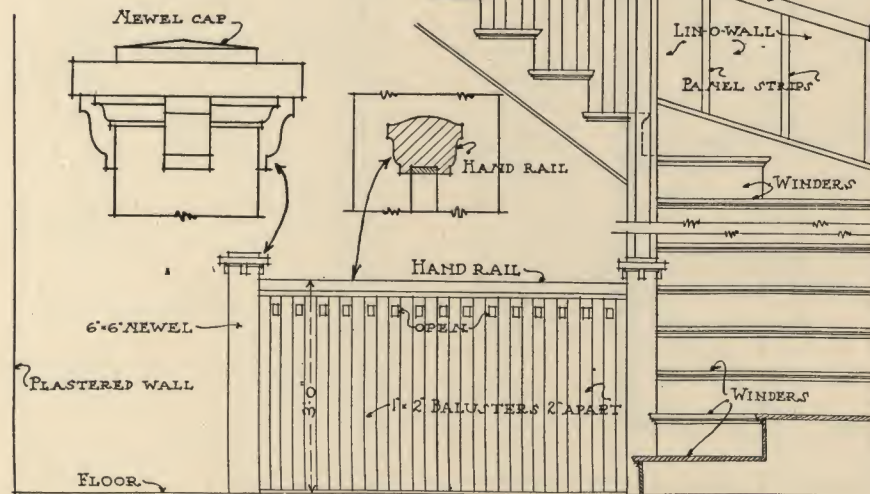
1 MEDICINE CASE 1

1 LINEN CASE DETAILS 1

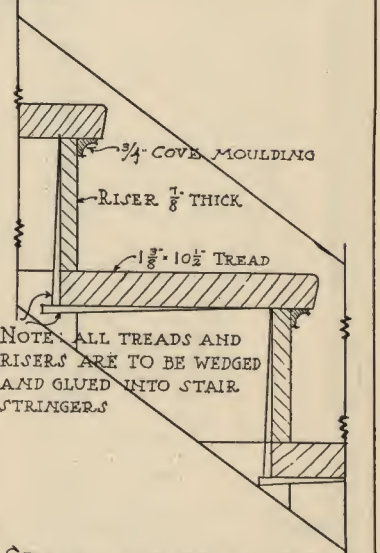
1 PANTRY DETAILS 1



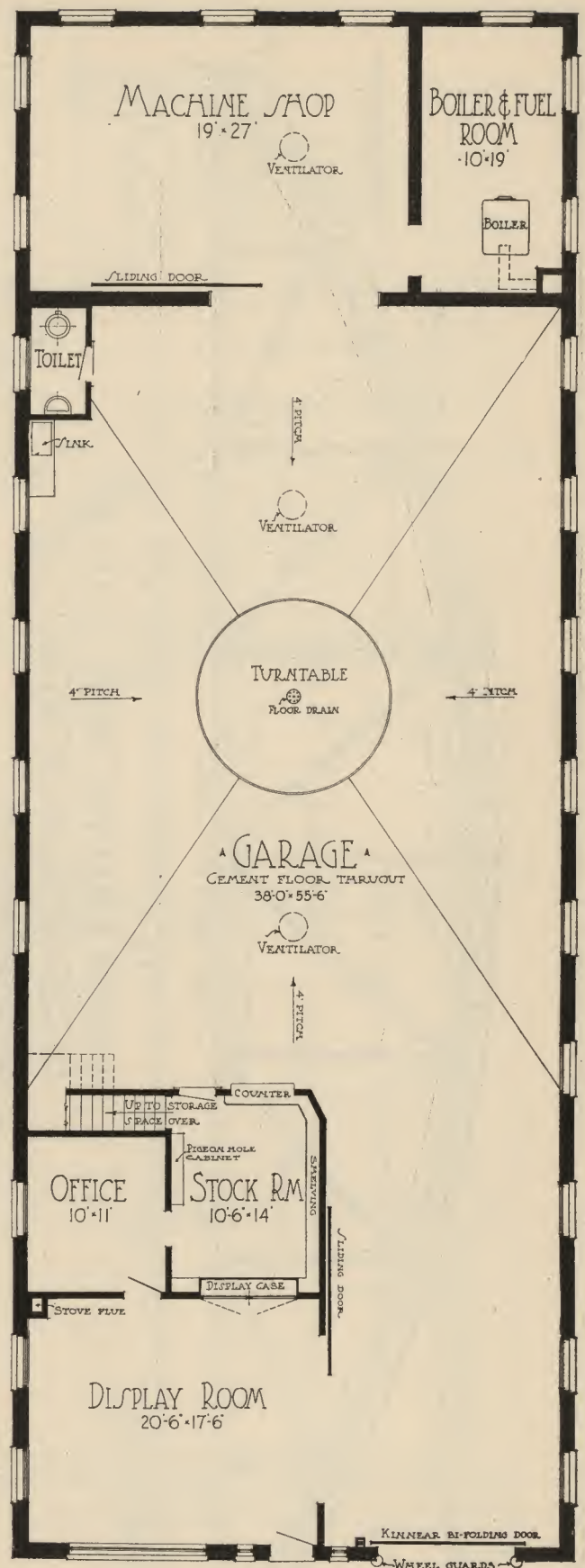
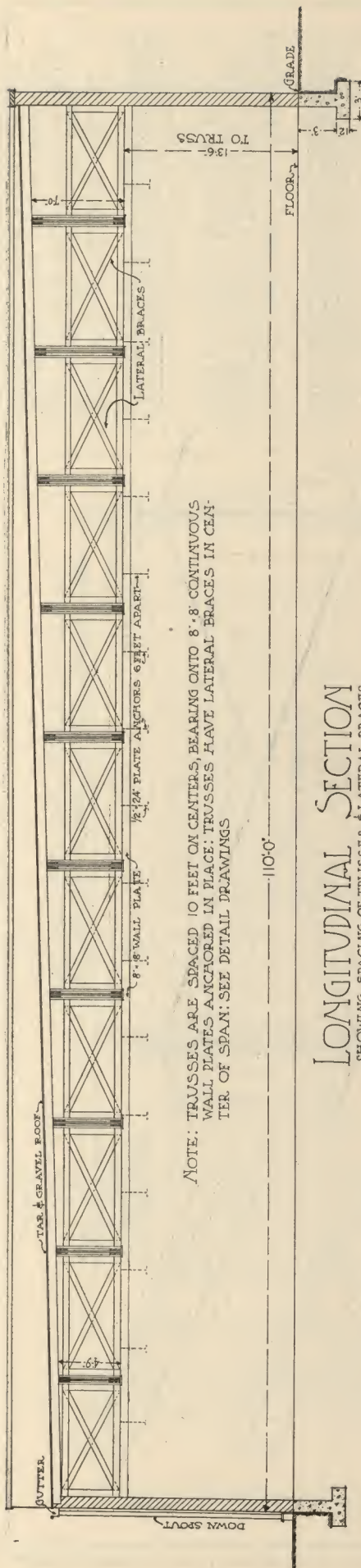
1 MANTEL & BOOKCASE DETAIL 1



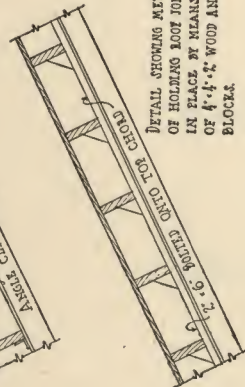
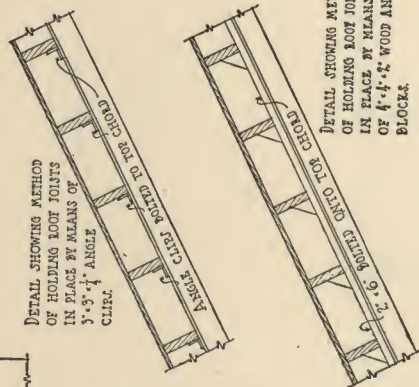
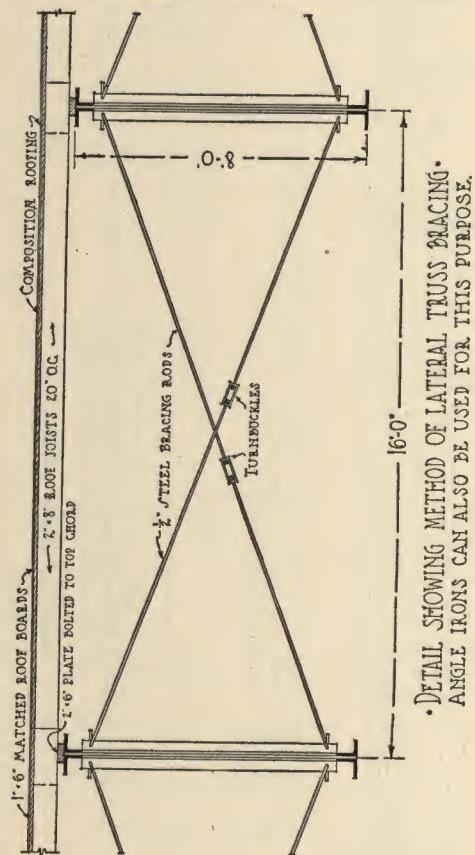
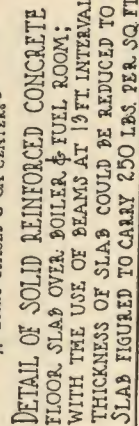
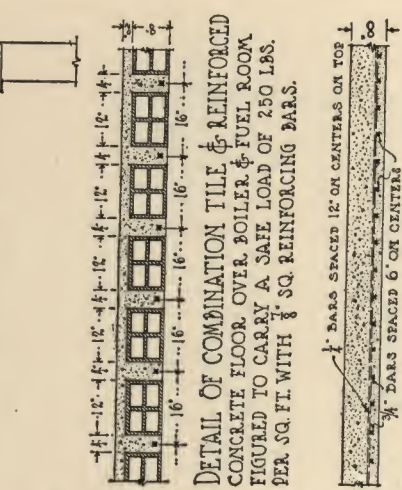
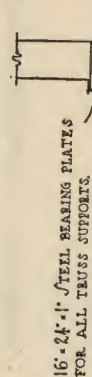
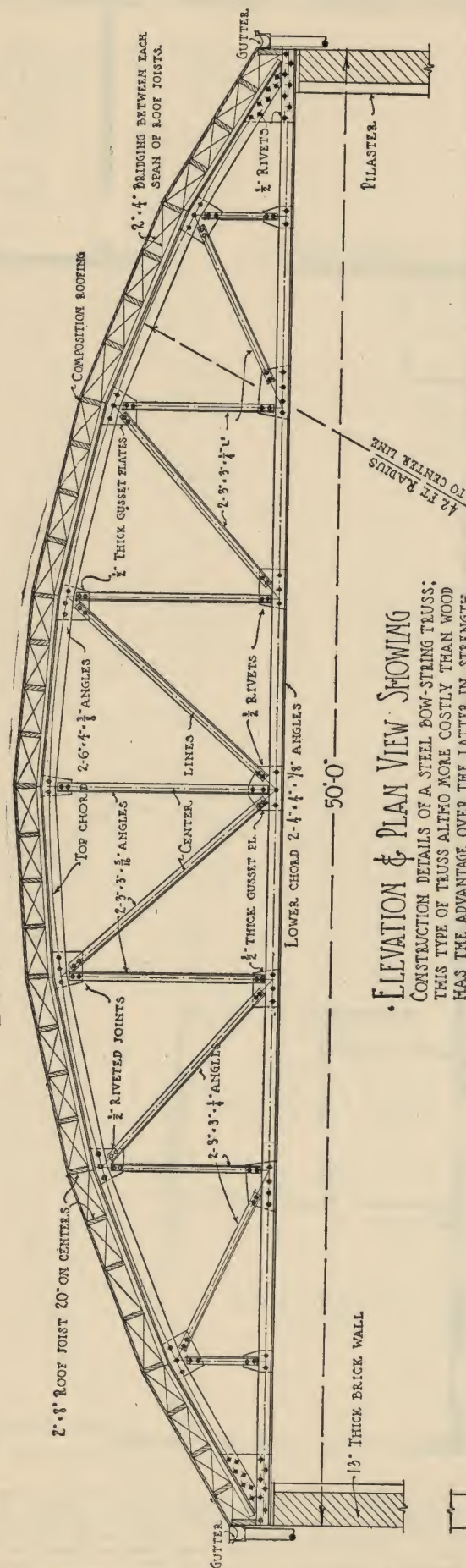
1 SECOND FLOOR STAIRWAY DETAILS 1



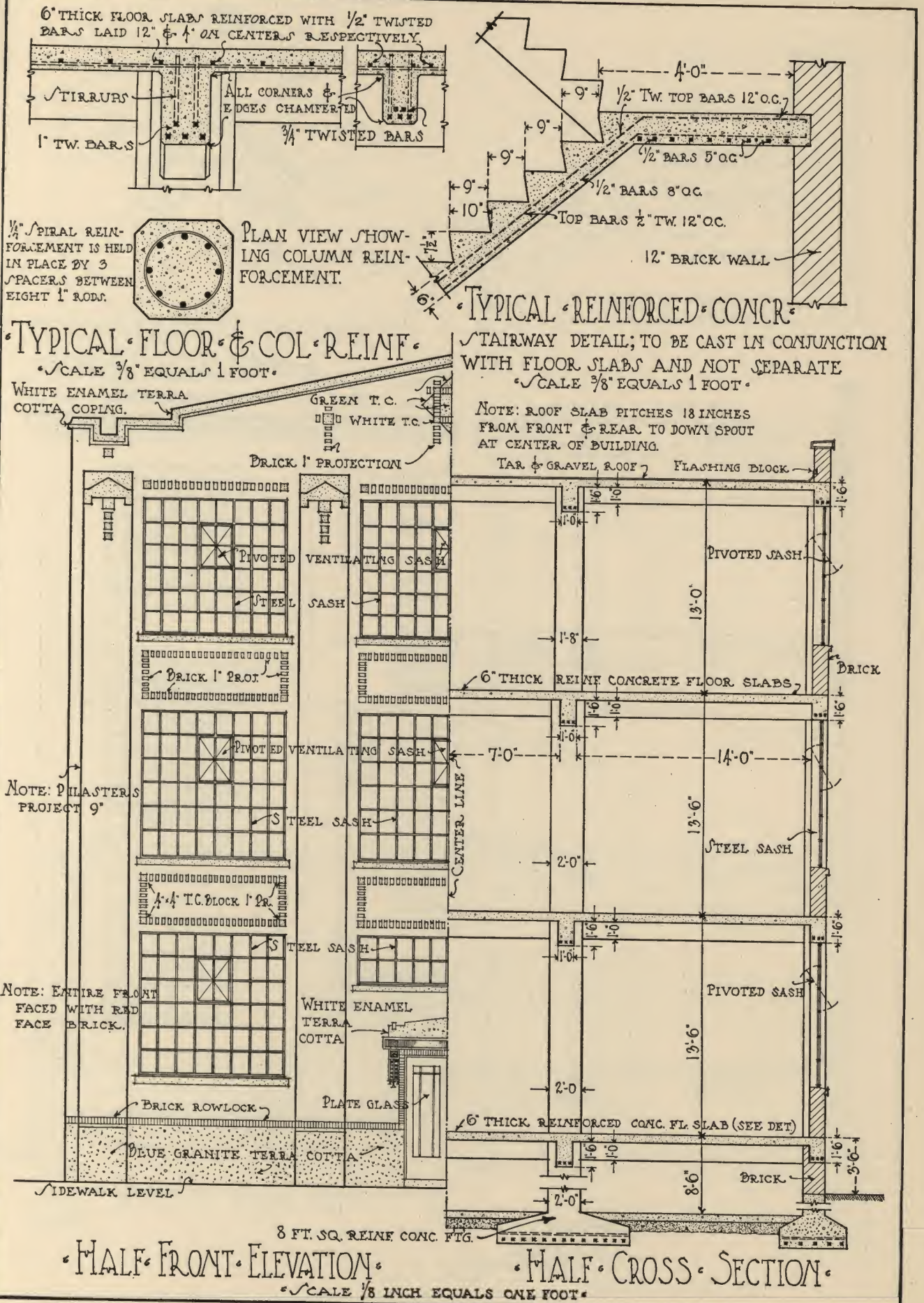
1 STAIR STRINGER DETAIL 1



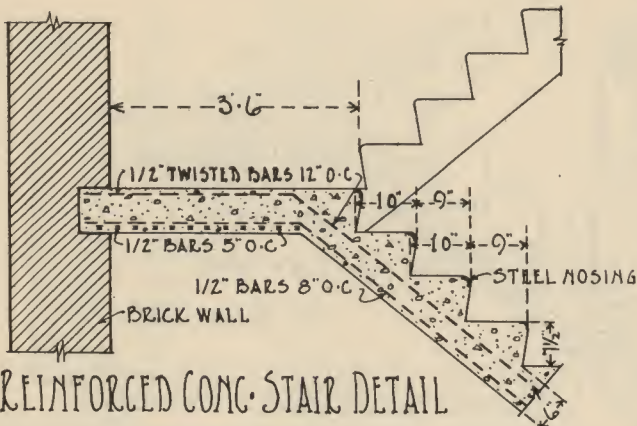
Floor Plan of Garage Showing the Arrangement of the Various Parts. The Front of the Building Contains a Display Room for Accessories and Show Cars. Back of This is the Stock Room and Office Which Can be Easily Made Very Attractive From the Front. The Turntable in the Center Simplifies the Handling of Cars. There is a Commodious Shop at the Rear.



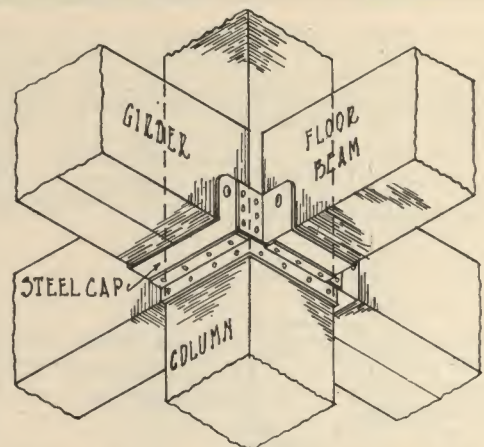
Details of Light Steel Truss for 50-Foot Span Curving Roof Garage, Also of Concrete Floor Over Heating Room in Public Garage.



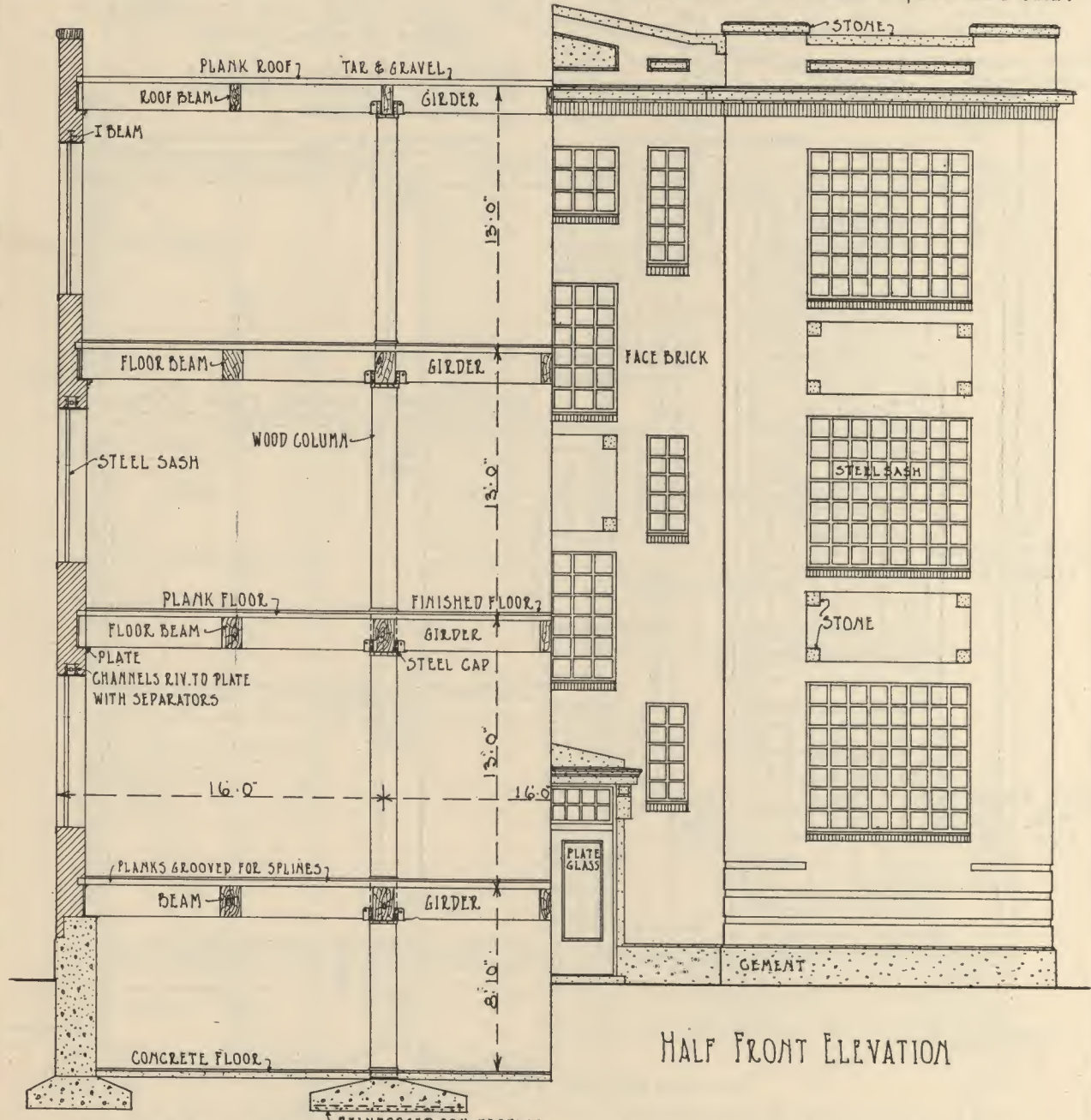
Details of Reinforced Concrete Factory Building. Reinforcing of Floors, Girders, and Columns Are Shown and Also Arrangement of Exterior Finish.



REINFORCED CONG. STAIR DETAIL

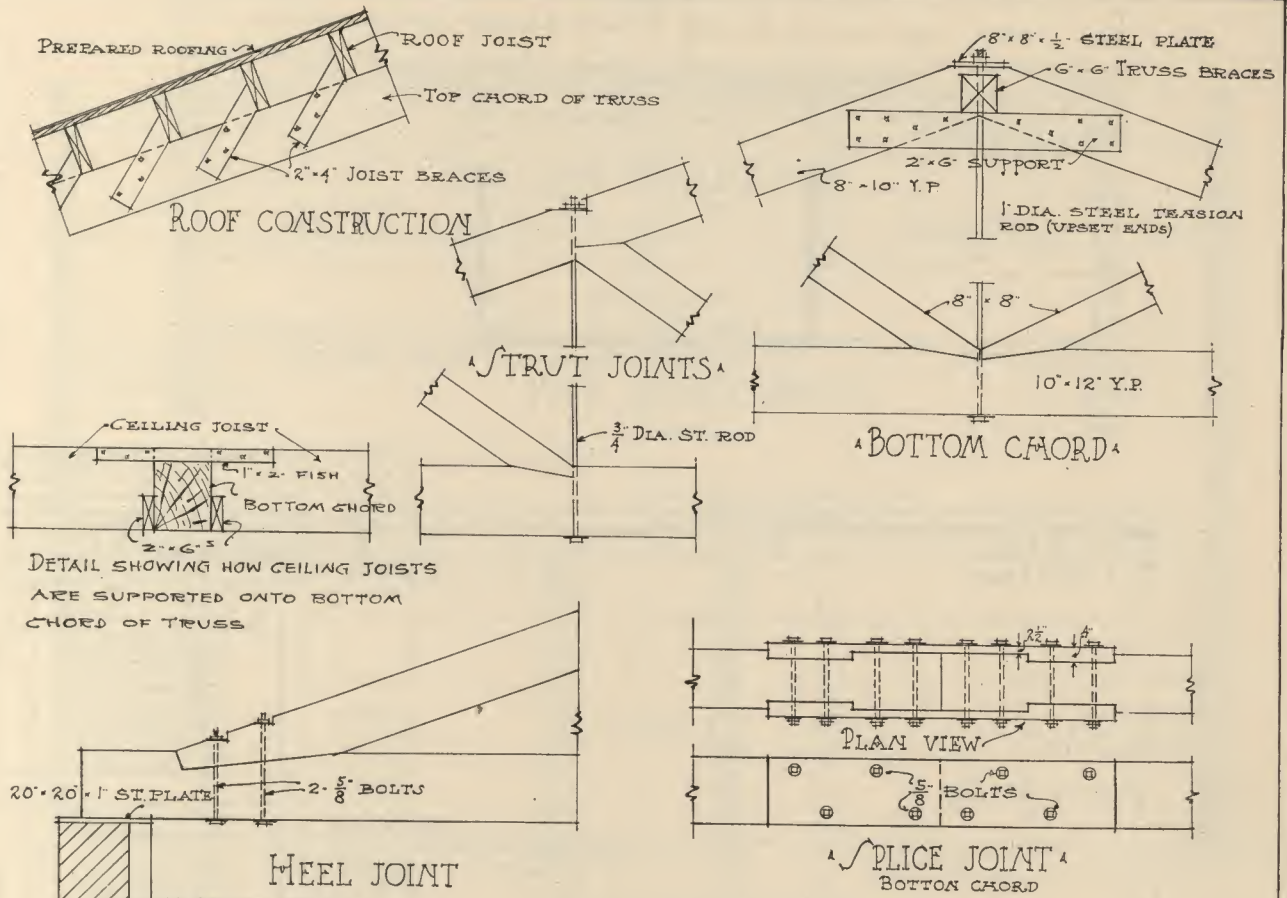


INTERSECTION OF COLUMN, GIRDER & BEAM



HALF CROSS SECTION

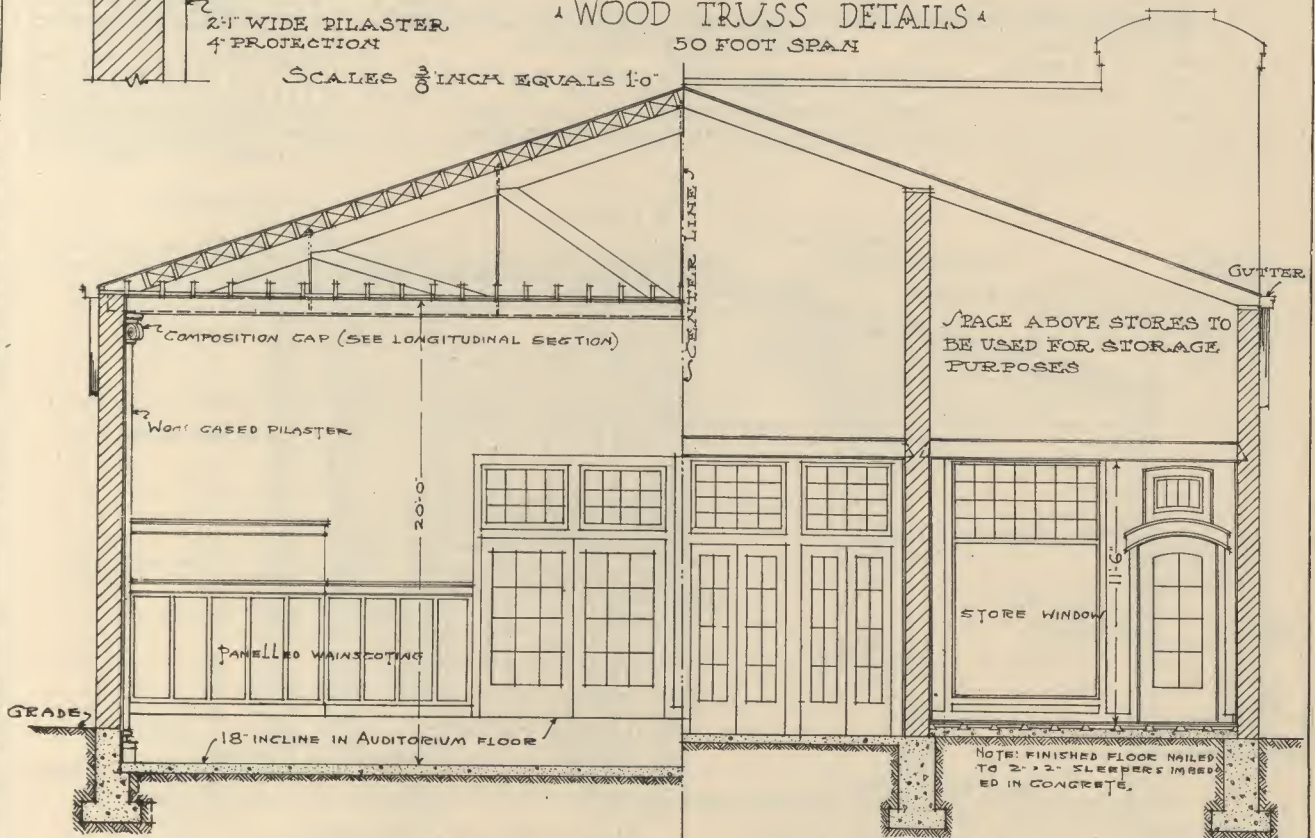
HALF FRONT ELEVATION



WOOD TRUSS DETAILS

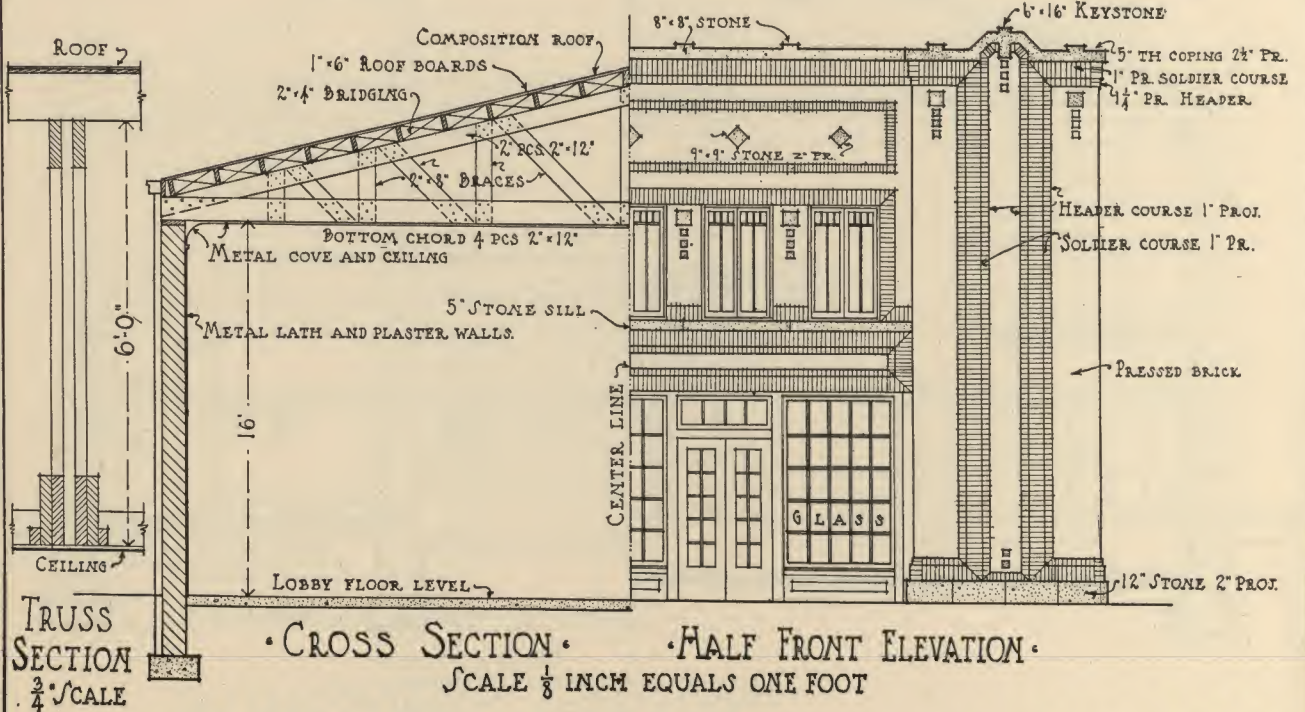
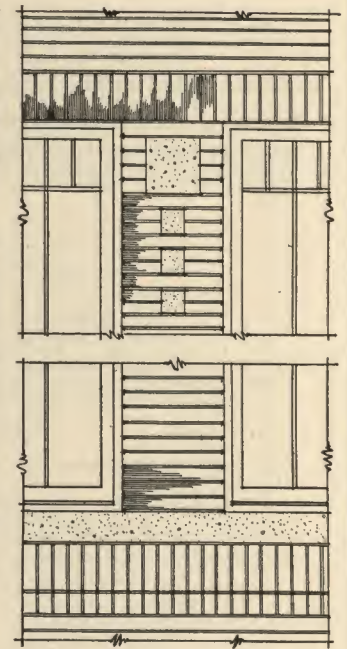
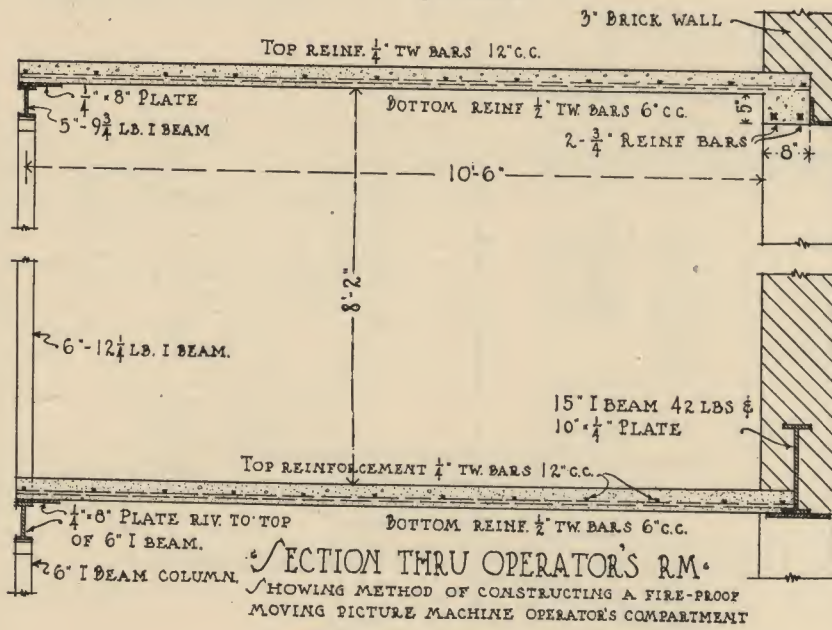
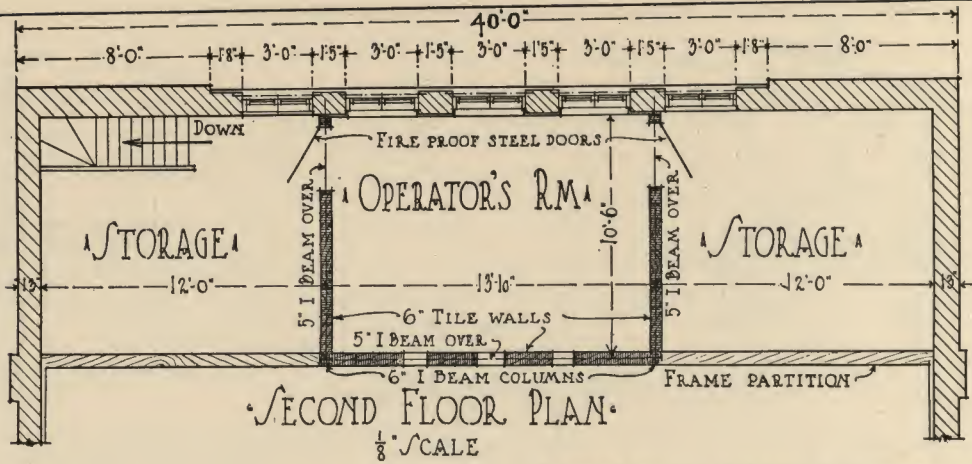
50 FOOT SPAN

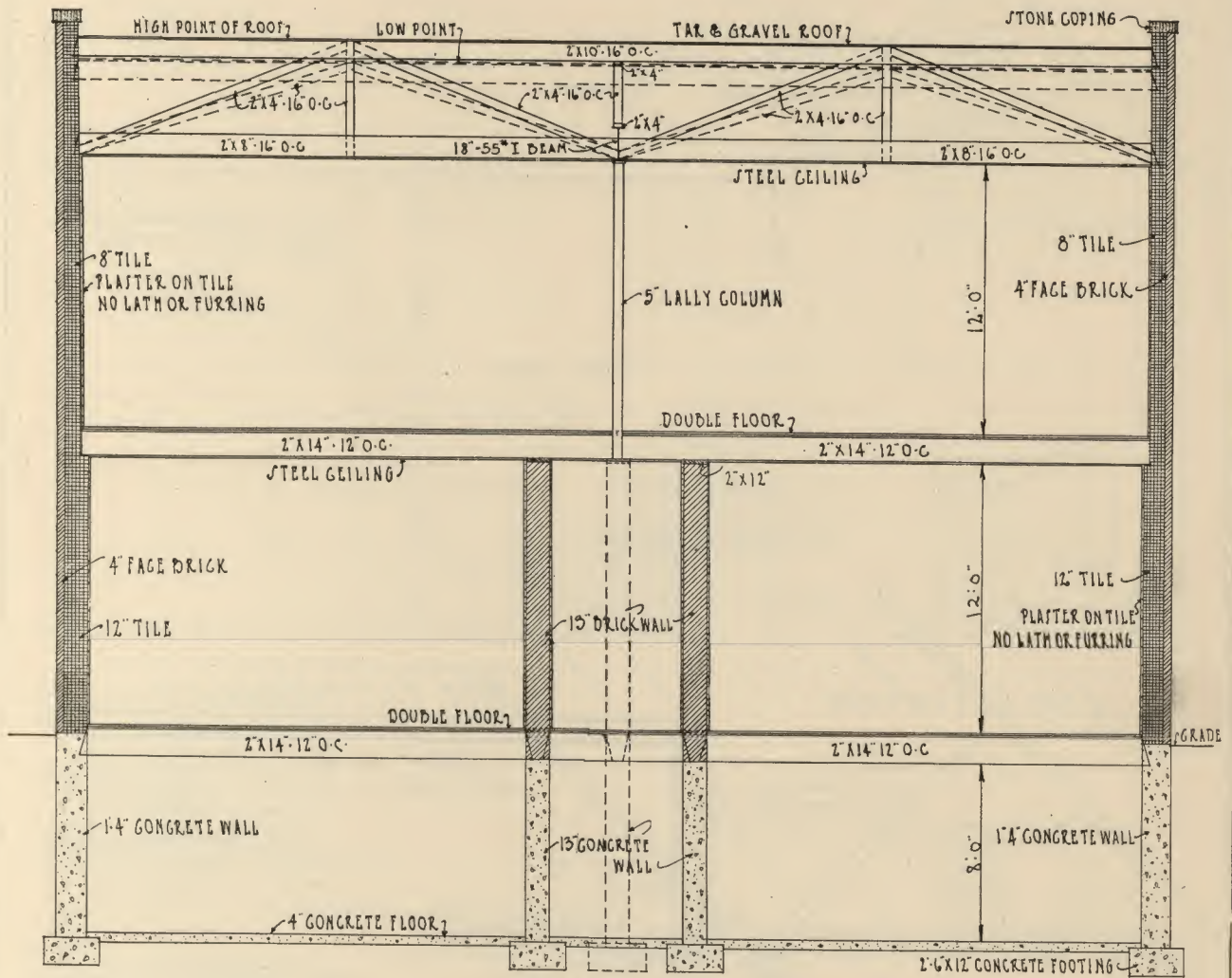
SCALE 3/8" INCH EQUALS 1'-0"



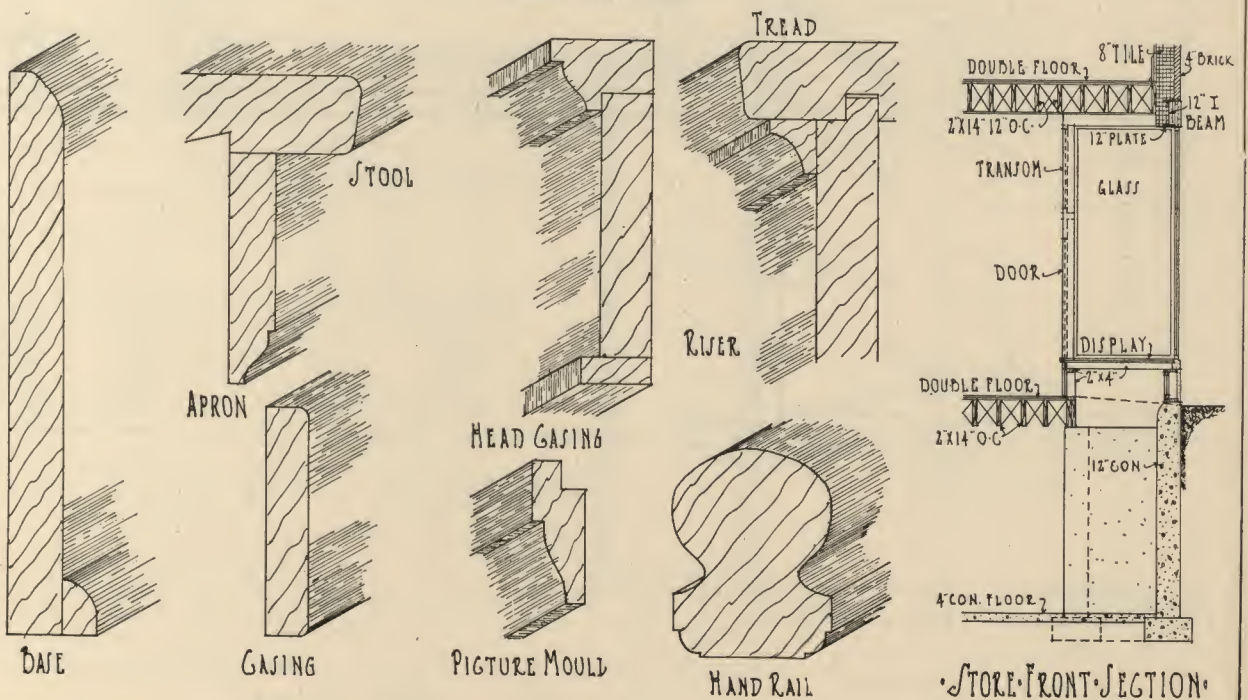
TRANSVERSE SECTION

SCALE 1/8" EQUALS ONE FT

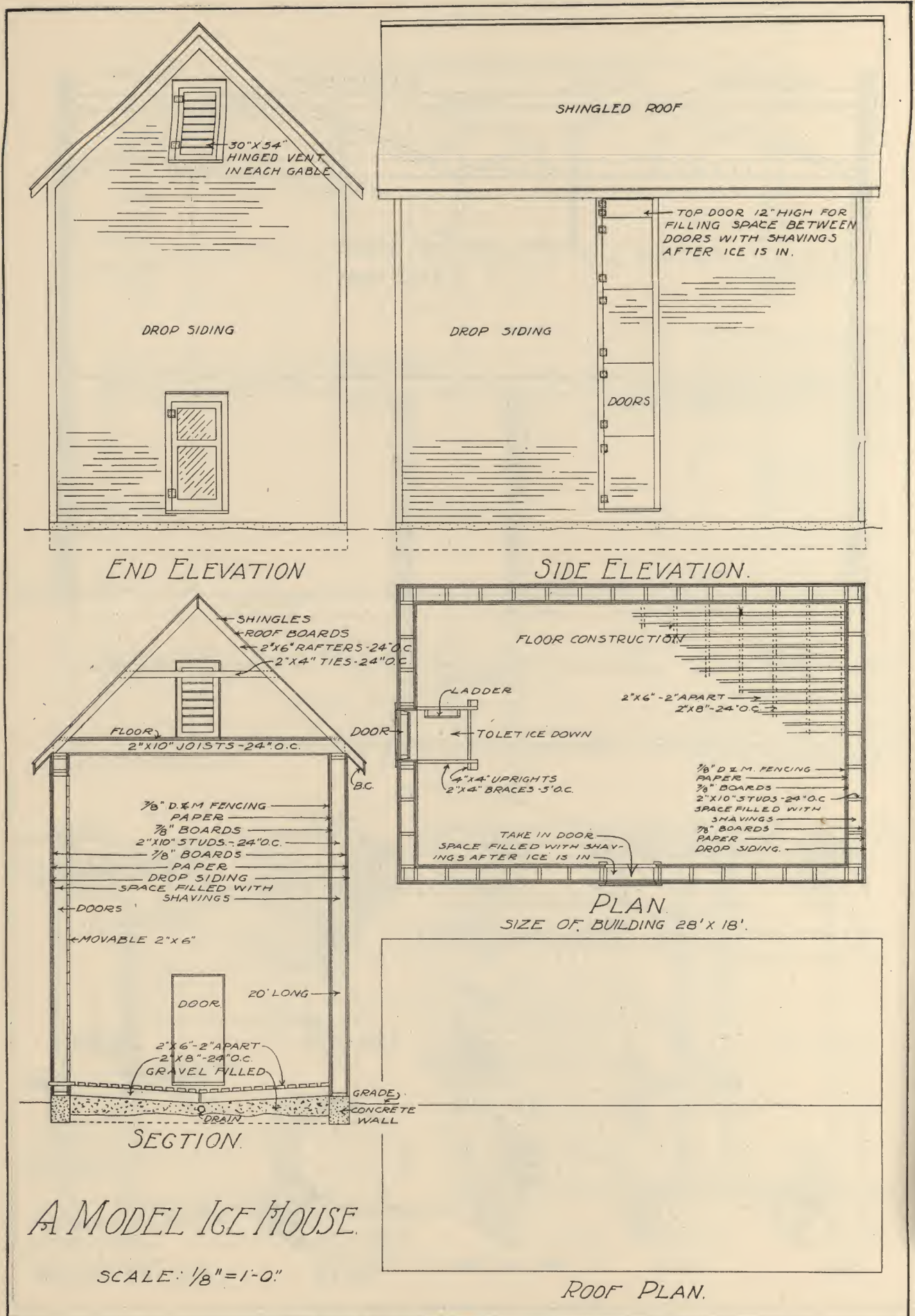


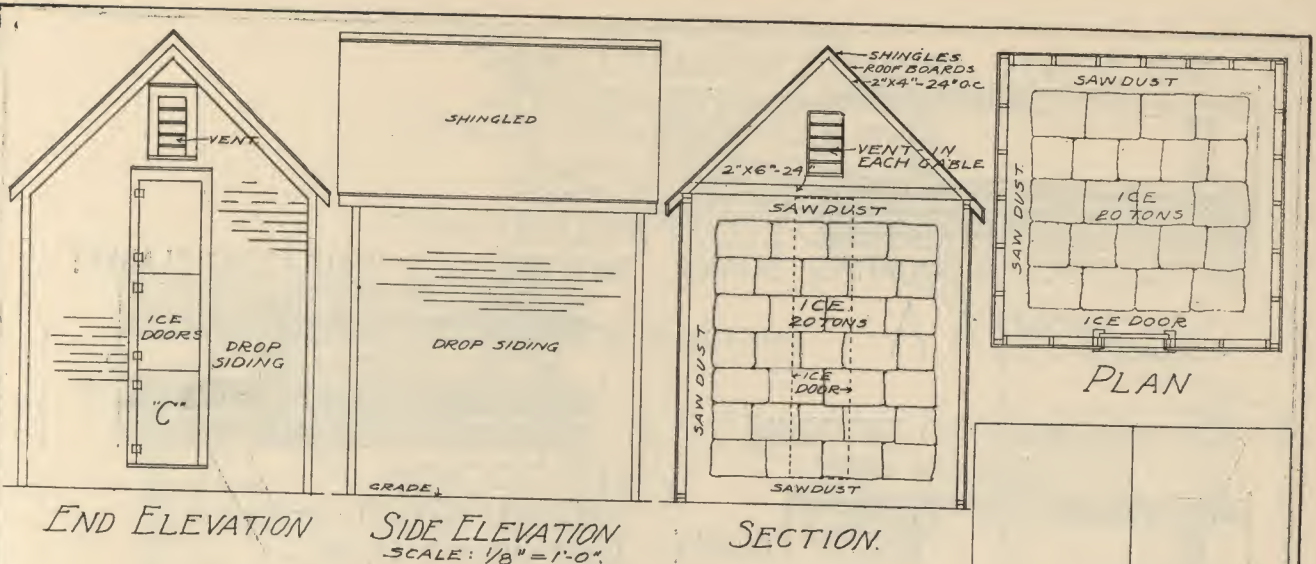


• HALF SECTION •



• STORE FRONT SECTION •





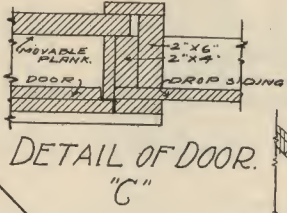
END ELEVATION

SIDE ELEVATION
SCALE: 1/8" = 1'-0"

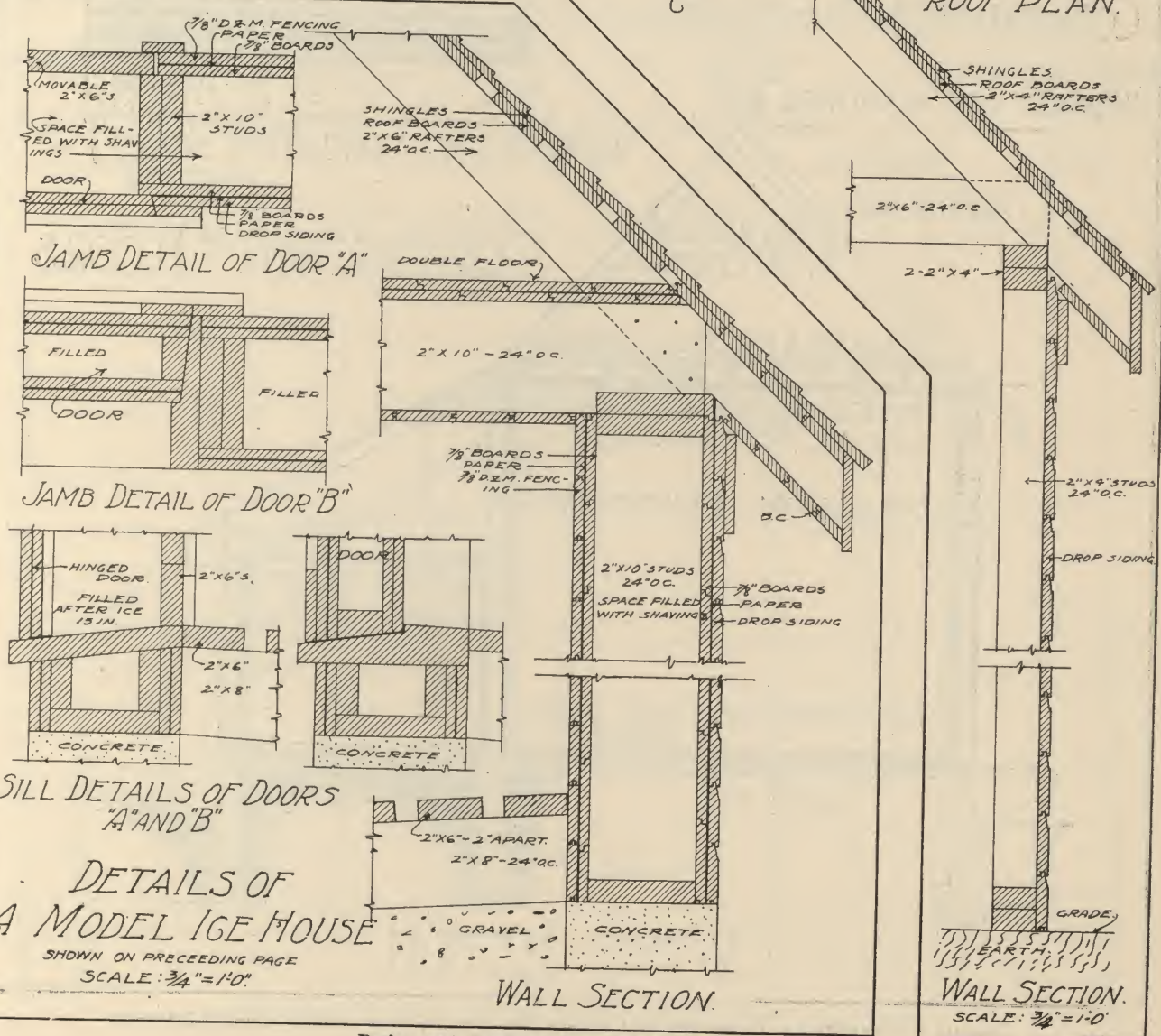
SECTION

PLAN

A SIMPLE ICE HOUSE FOR THE FARM.



ROOF PLAN.



JAMB DETAIL OF DOOR "A"

JAMB DETAIL OF DOOR "B"

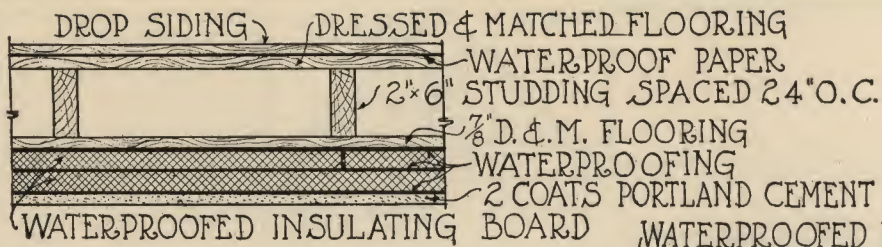
SILL DETAILS OF DOORS "A" AND "B"

DETAILS OF A MODEL ICE HOUSE

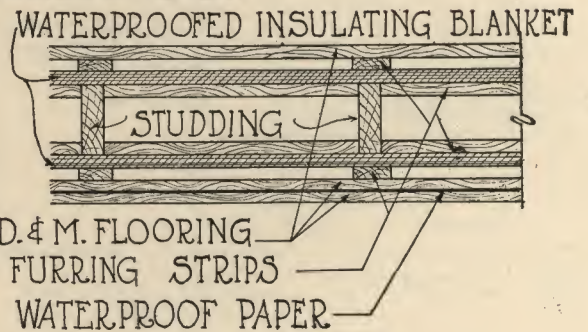
SHOWN ON PRECEDING PAGE
SCALE: 3/4" = 1'-0"

WALL SECTION

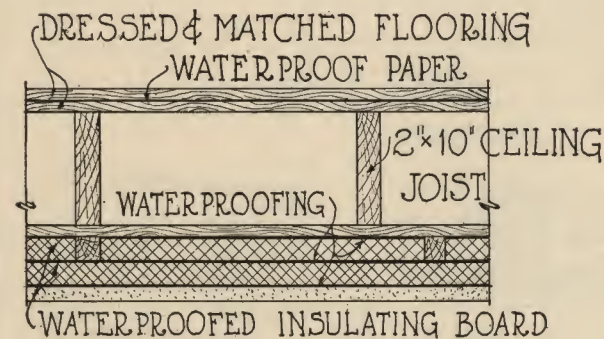
WALL SECTION
SCALE: 3/4" = 1'-0"



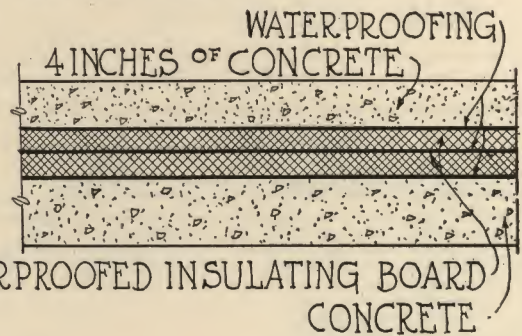
SECTION A-A



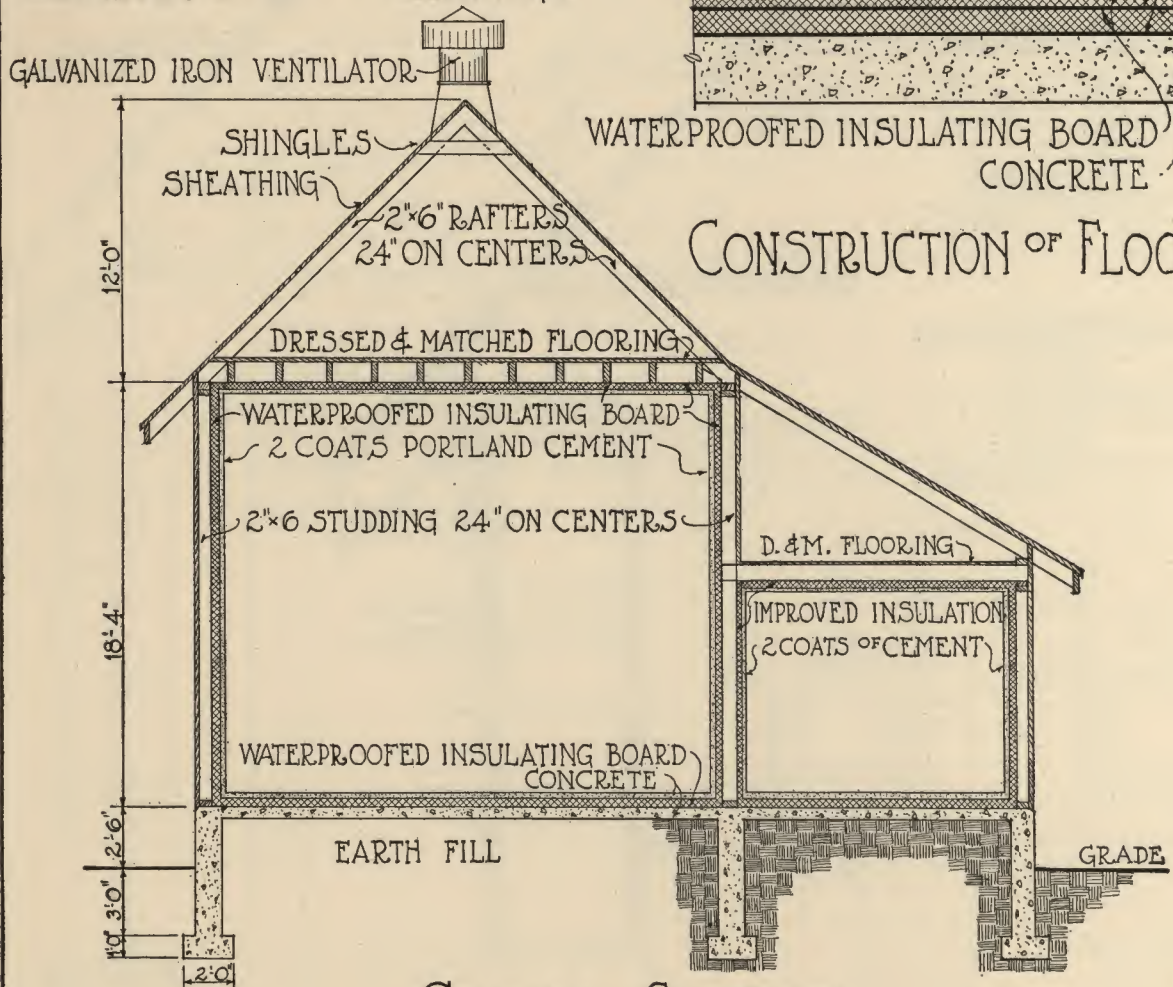
SECTION B-B



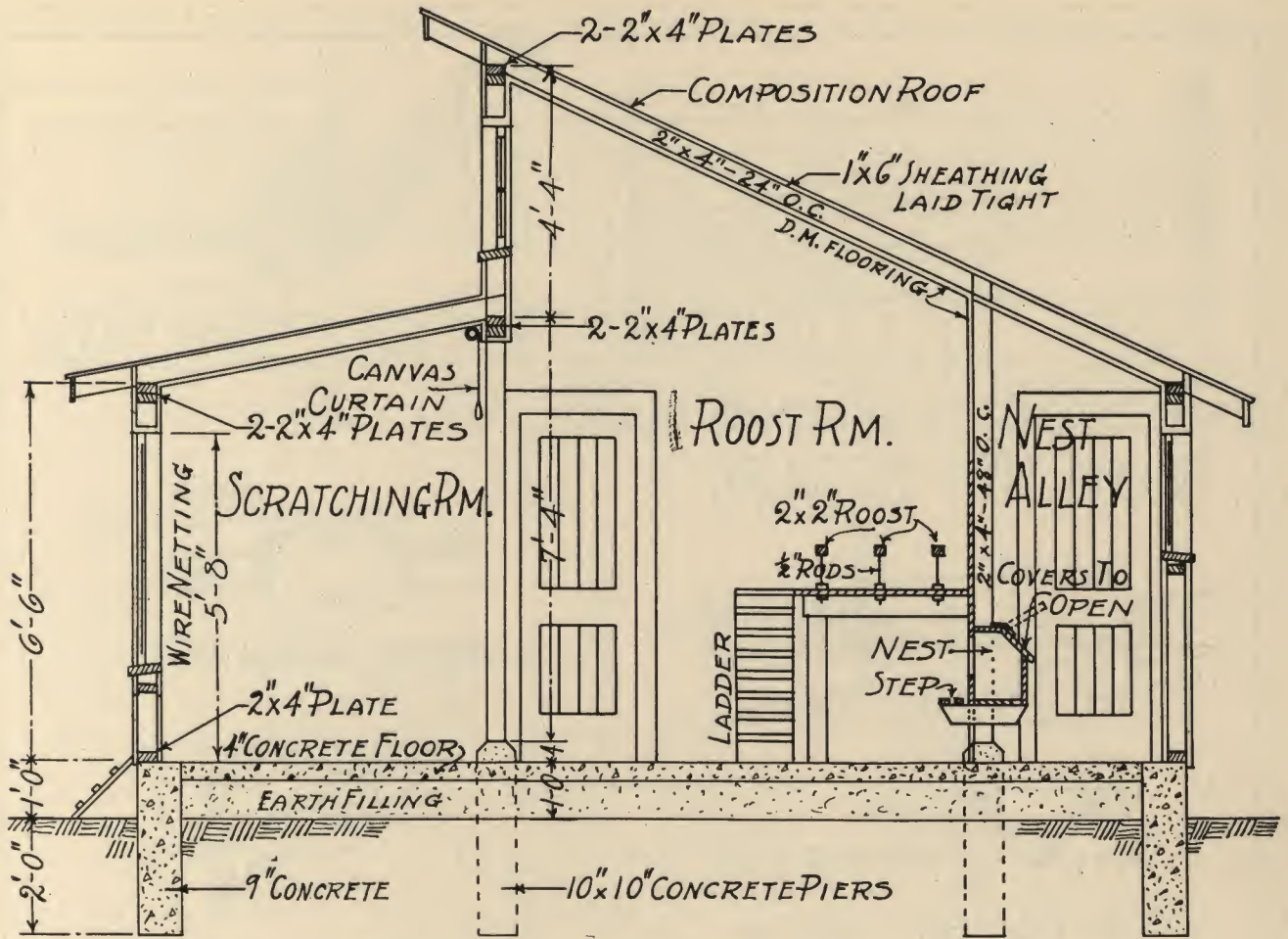
CONSTRUCTION OF CEILINGS



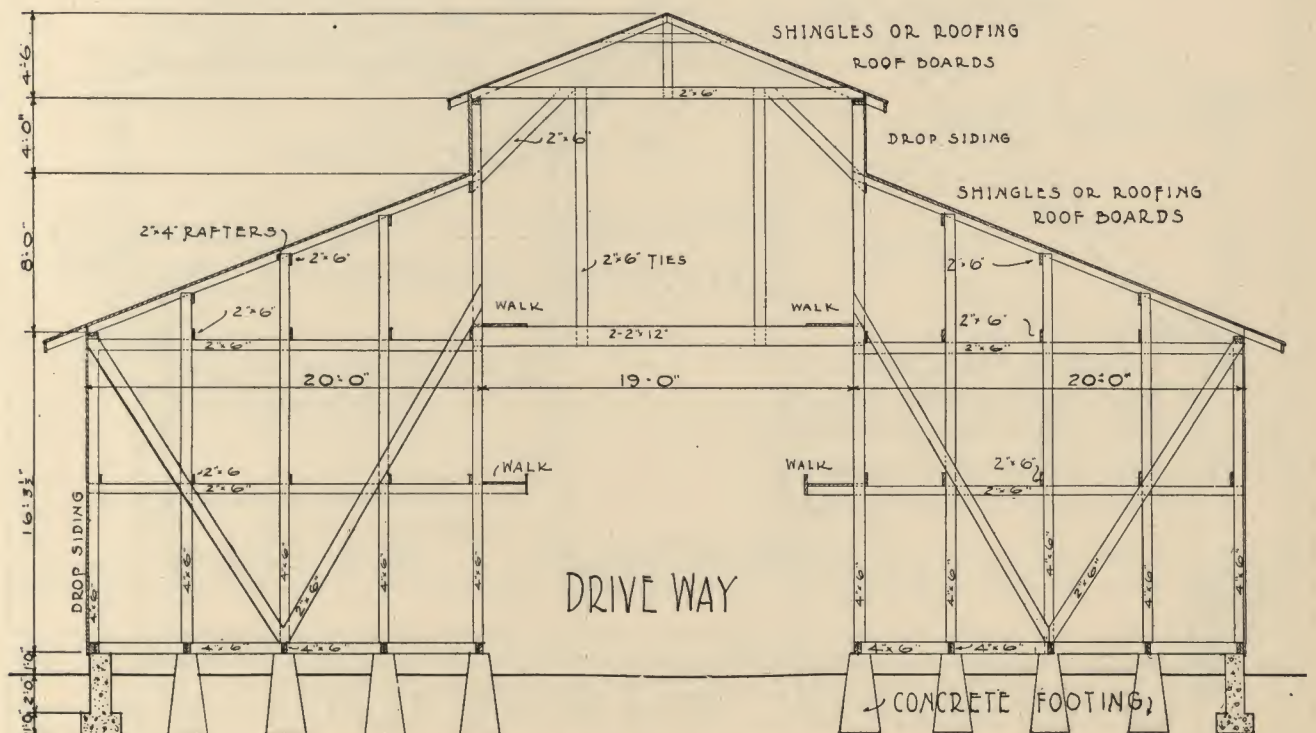
CONSTRUCTION OF FLOORS



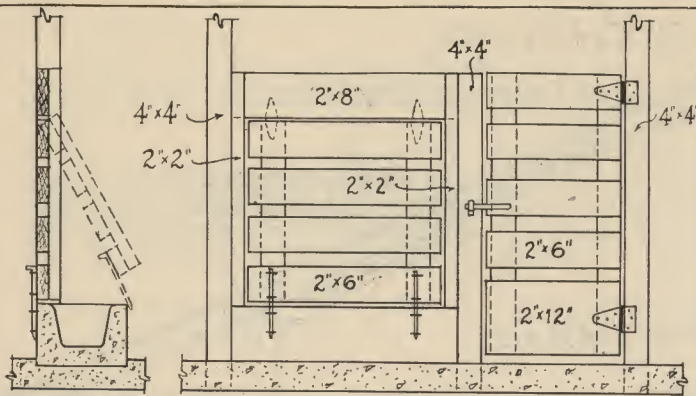
CROSS SECTION



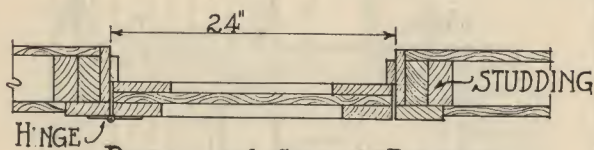
CROSS SECTION OF POULTRY HOUSE



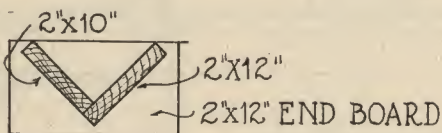
Cross-Section of Lumber Yard Shed, Showing Approved Method of Construction.



TROUGH SECTION FRONT VIEW OF TROUGH
TROUGH & PEN ENCLOSURE



DETAIL OF SMALL DOORS

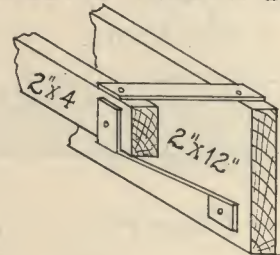


WOOD TROUGH.

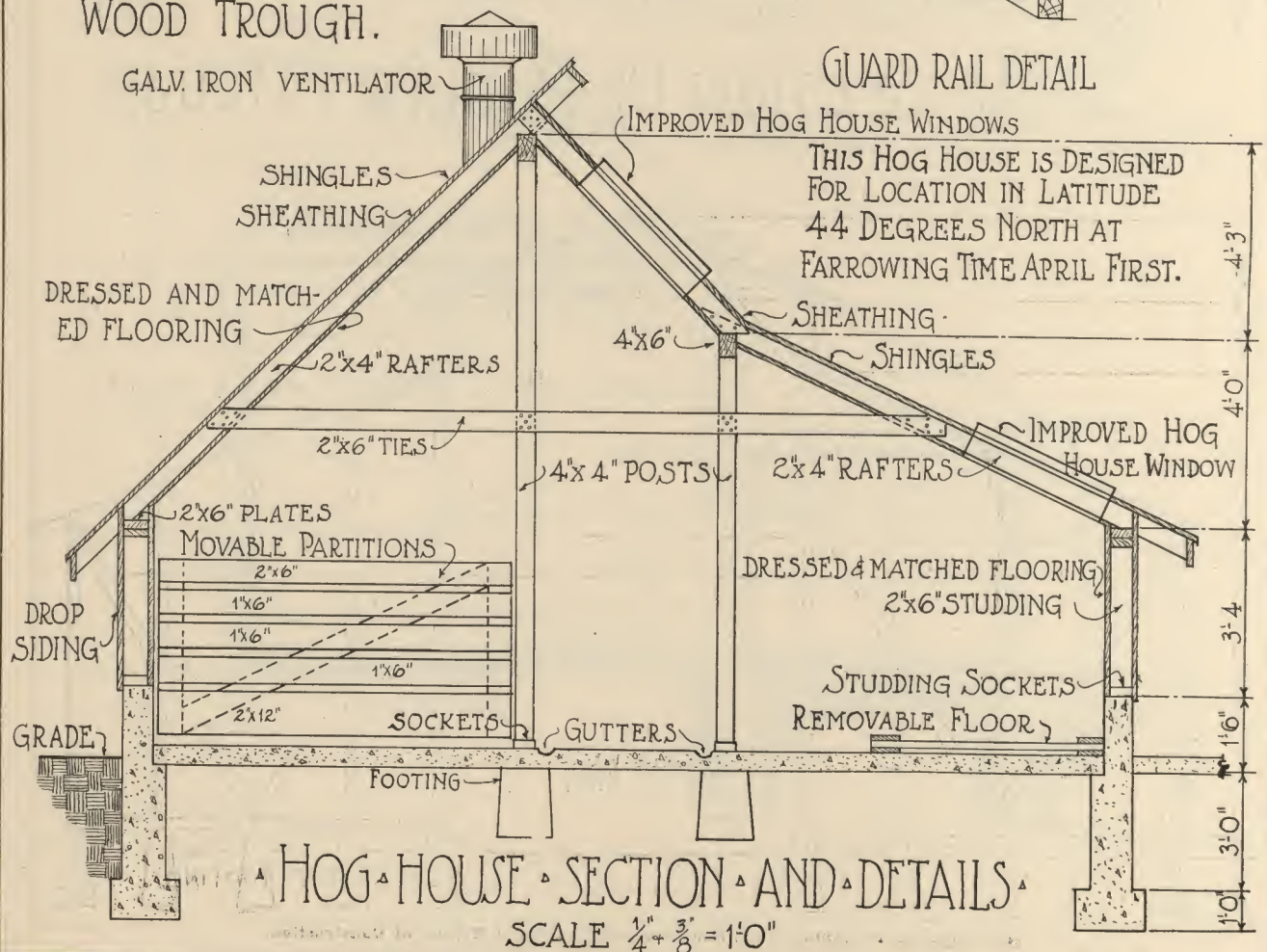
GALV. IRON VENTILATOR



IMPROVED WINDOW DETAIL



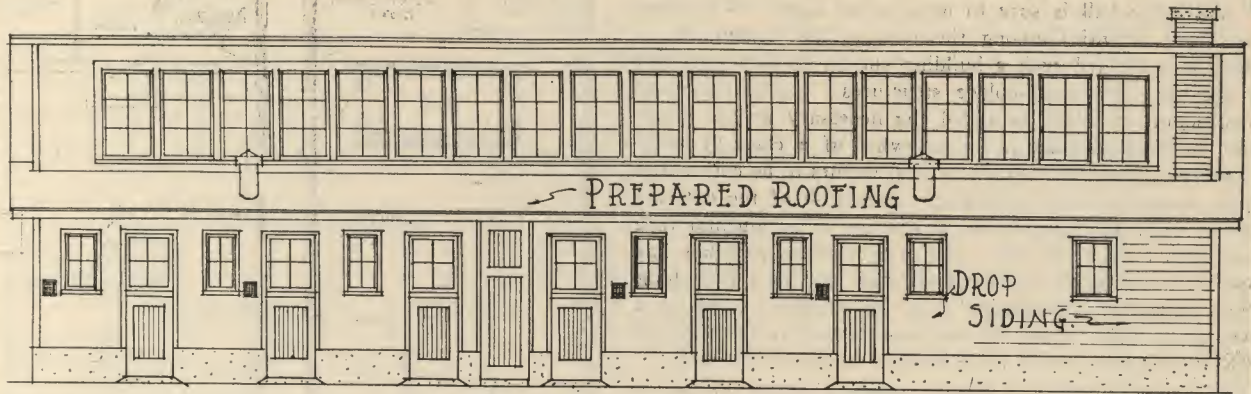
GUARD RAIL DETAIL



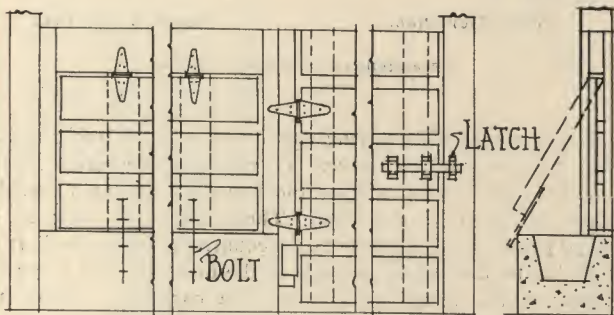
HOG HOUSE SECTION AND DETAILS

SCALE $\frac{1}{4}'' = \frac{3}{8}' = 1'-0''$

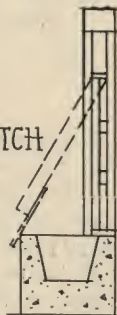
Details of Winter Hog House of Modified Saw-Tooth Roof Type. Face This Building Toward the South, and It Will be Warm and Well Lighted All Winter.



FRONT ELEVATION



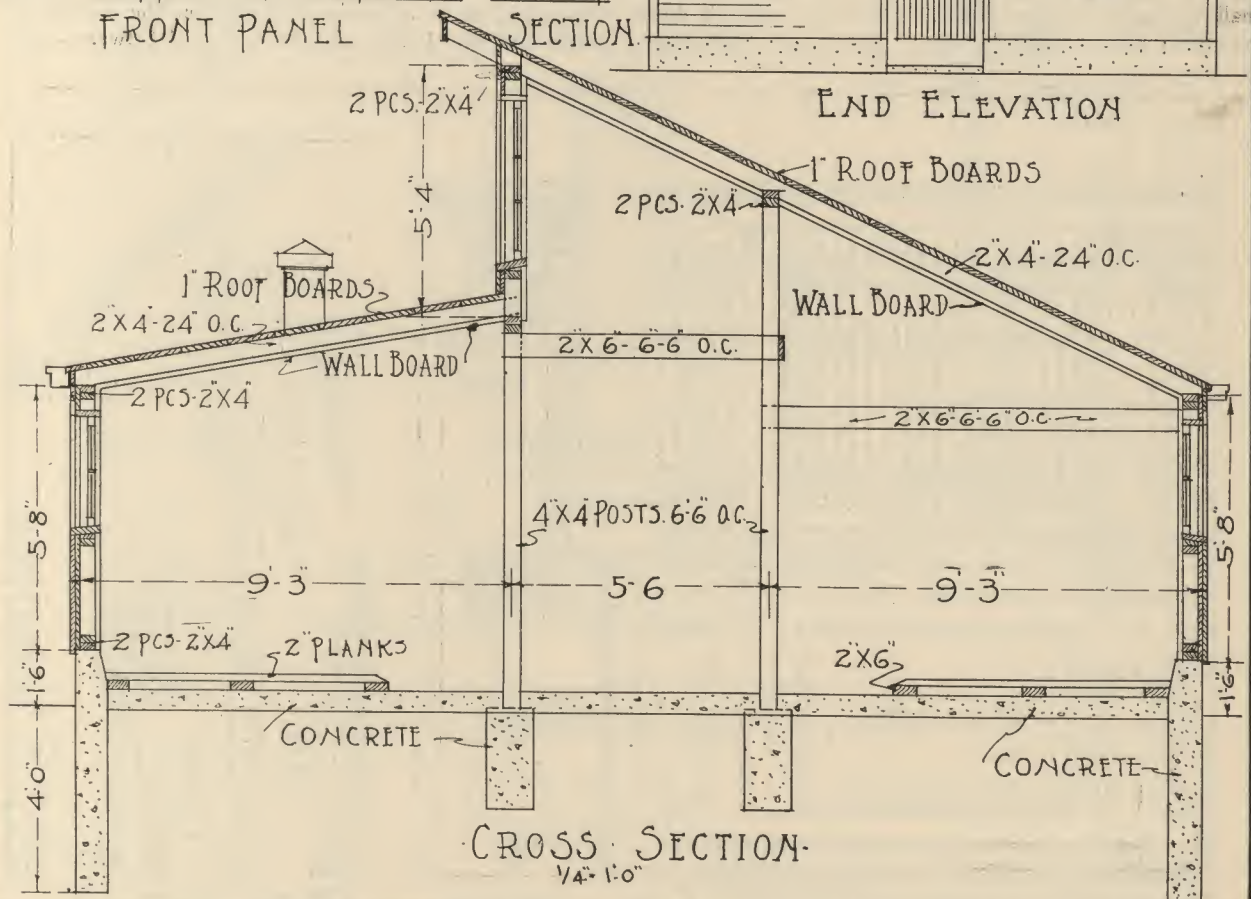
FRONT PANEL



SECTION



END ELEVATION



CROSS SECTION
1/4" = 1'-0"

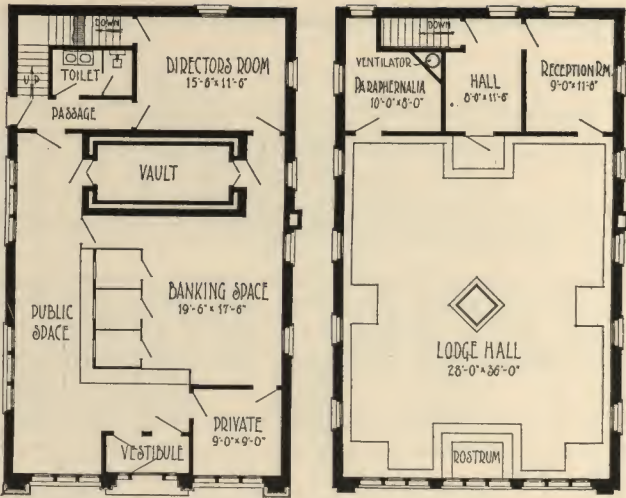
COMMUNITY HOG HOUSE WITH CONCRETE YARDS.

Bank Building and Lodge Hall

SINCE the building which is to contain a banking business and lodge hall is sure to become the center of business and social activities among the men in the community in which it is erected such a building should be somewhat out of the class of commonplace structures. Good substantial construction to which is added the necessary artistic treatment required to place it in somewhat of a class by itself are the most important of the several factors to be considered in the design of such a building. The finish of the exterior may be made very impressive by the use of ornamental face brick with terra cotta trim. The use of these materials has come to be standard in city construction and there is nothing which impresses the stranger with the progressiveness of a town more than to see the business section being built up with structures in which these modern materials are used.

The building illustrated here occupies a corner lot and is 30 by 50 feet. The entire first floor is designed as a bank and the second floor is taken up by the lodge hall. The ornamental front is placed on the 30-foot side of the building. The portions of the front wall above the first floor windows and between the sets of second floor windows are finished with face brick while the entrance, columns and entablature are built of terra cotta. The small-paned windows add a great deal to the distinctive appearance of the building. There is a sufficiently elaborate treatment given all of the details to mark this building as one of importance among the various structures along the street upon which it would be placed.

The heavy brass trimmed door of the bank opens into a small vestibule in which there are entrance and exit doors connecting with the main corridor. At the right upon enter-

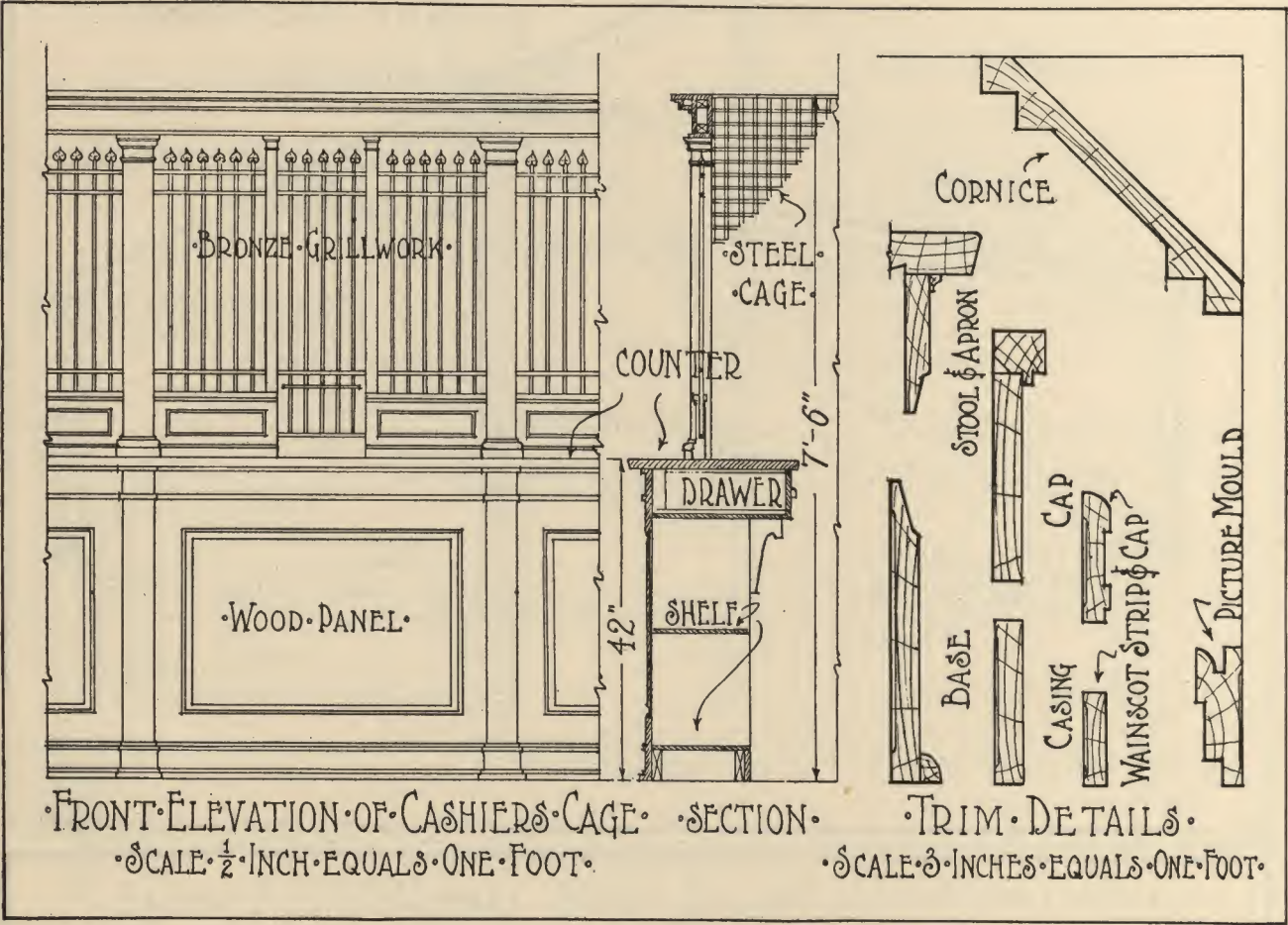


First Floor Plan.

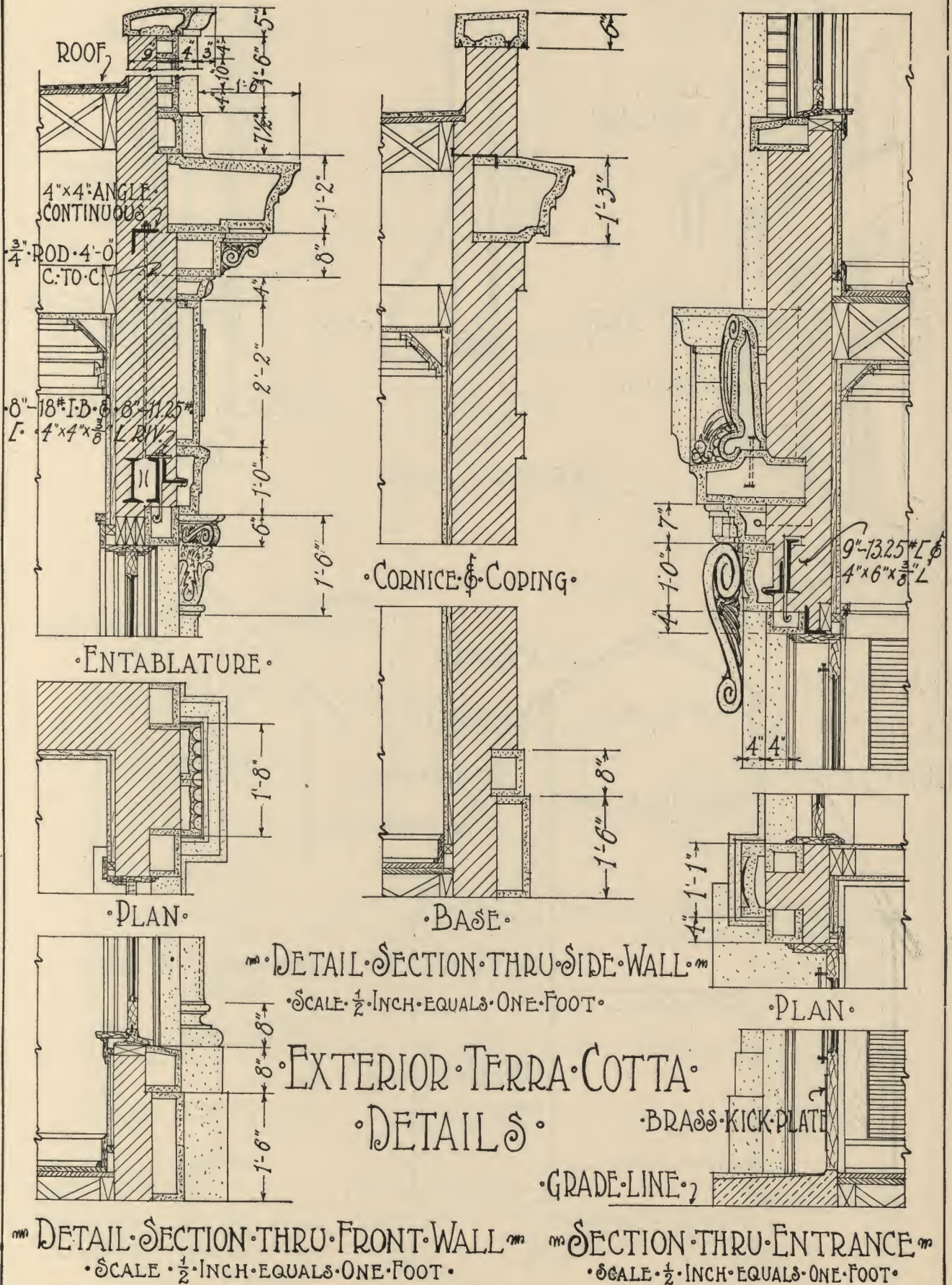
Second Floor Plan.

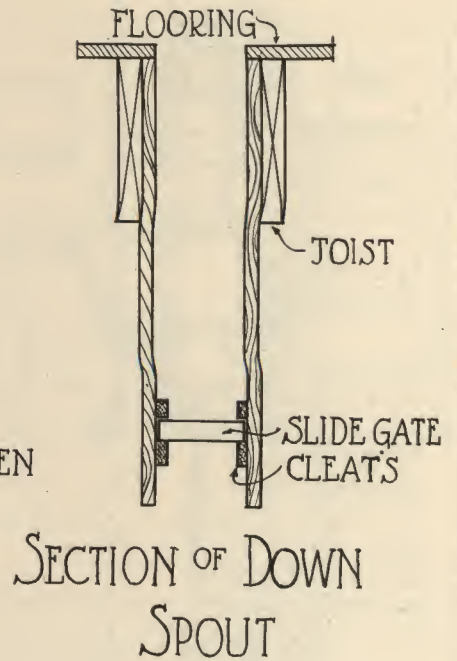
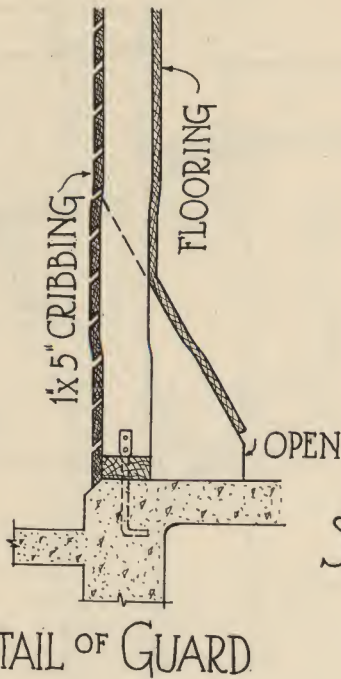
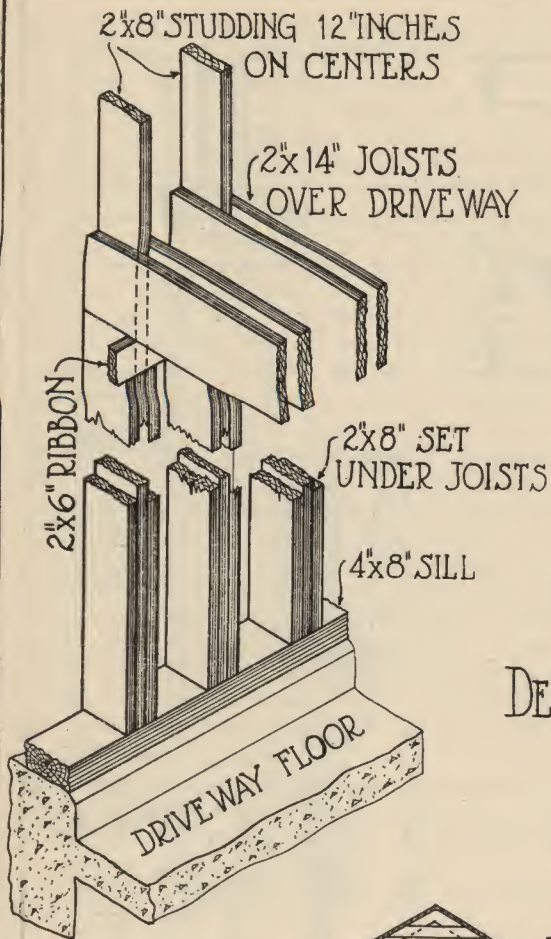
Arrangement of Bank Building.

ing is a private office having doors both into the public square and into the banking space. Three cages are placed facing the side wall of the building and bounding the main corridor near the front of the bank. These cages are built up of wood panels from the floor to the counter, which extends from the private office along the side of the first cage and along the front of the three cages down the corridor. Above the counter there is a bronze grillwork on the outside of the cages and steel lattice partitions are used between cages.

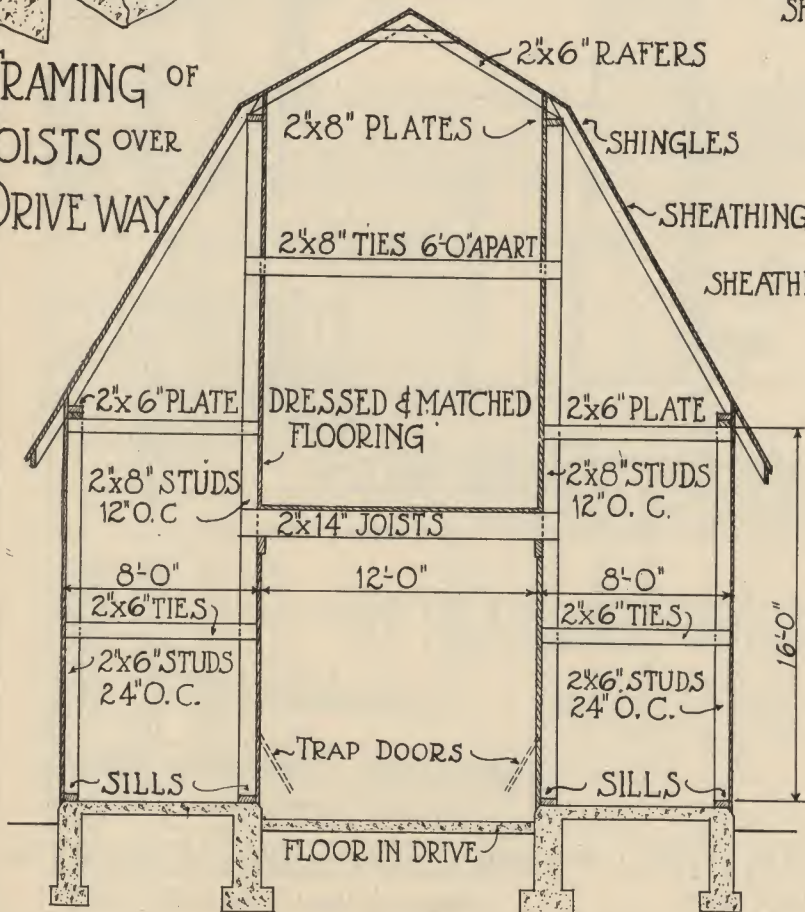


Front Elevation of Cashier's Cage and Trim Details in Bank Building.

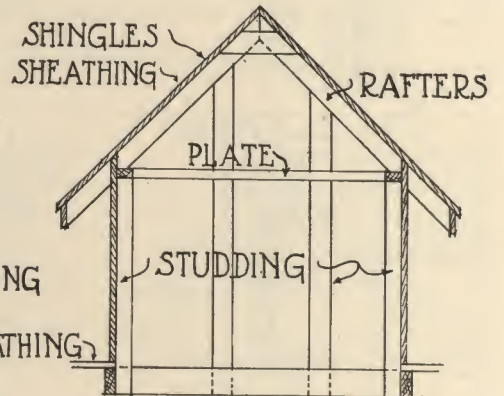




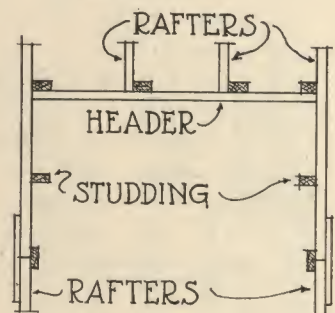
FRAMING OF
JOISTS OVER
DRIVE WAY



CROSS SECTION

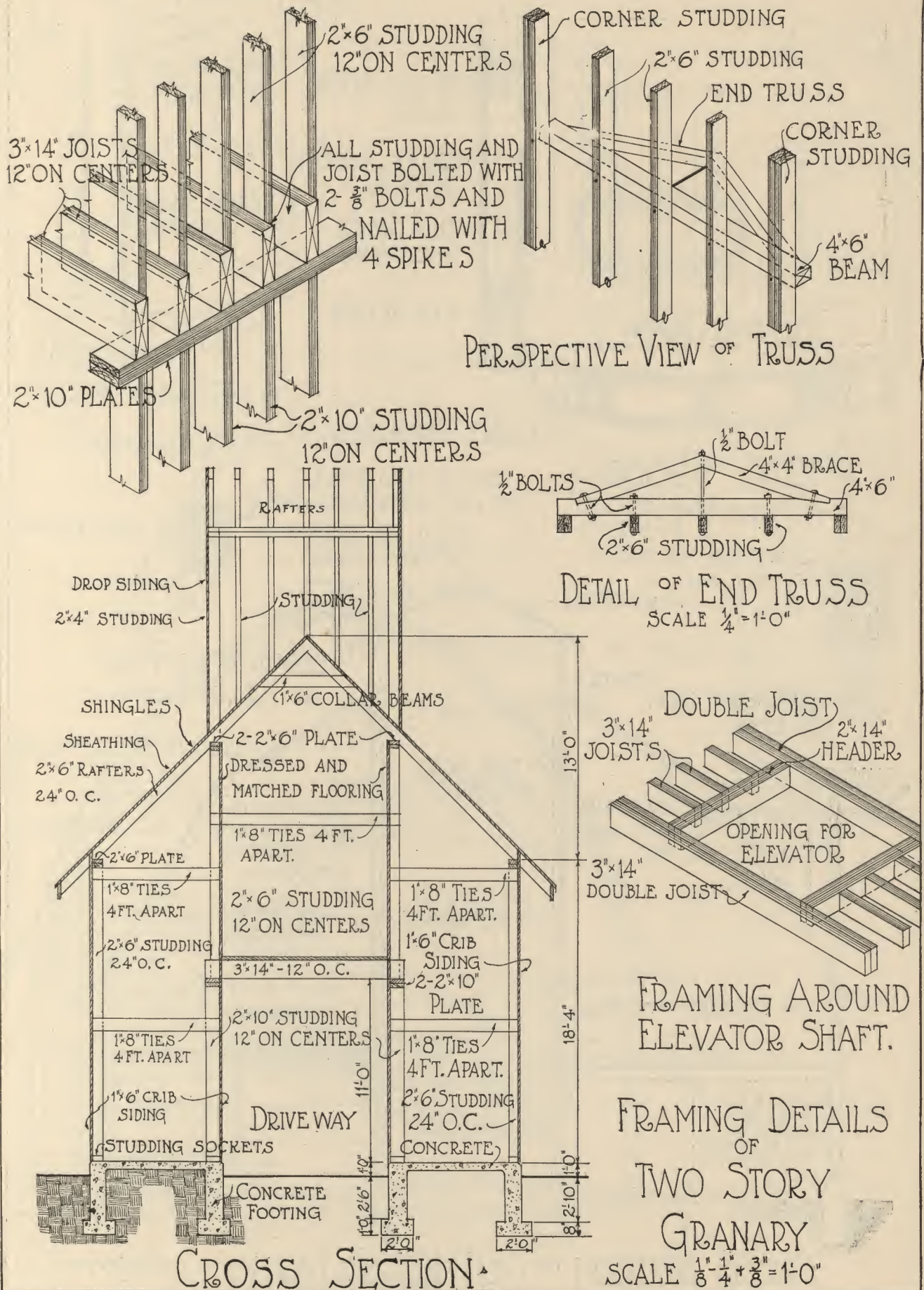


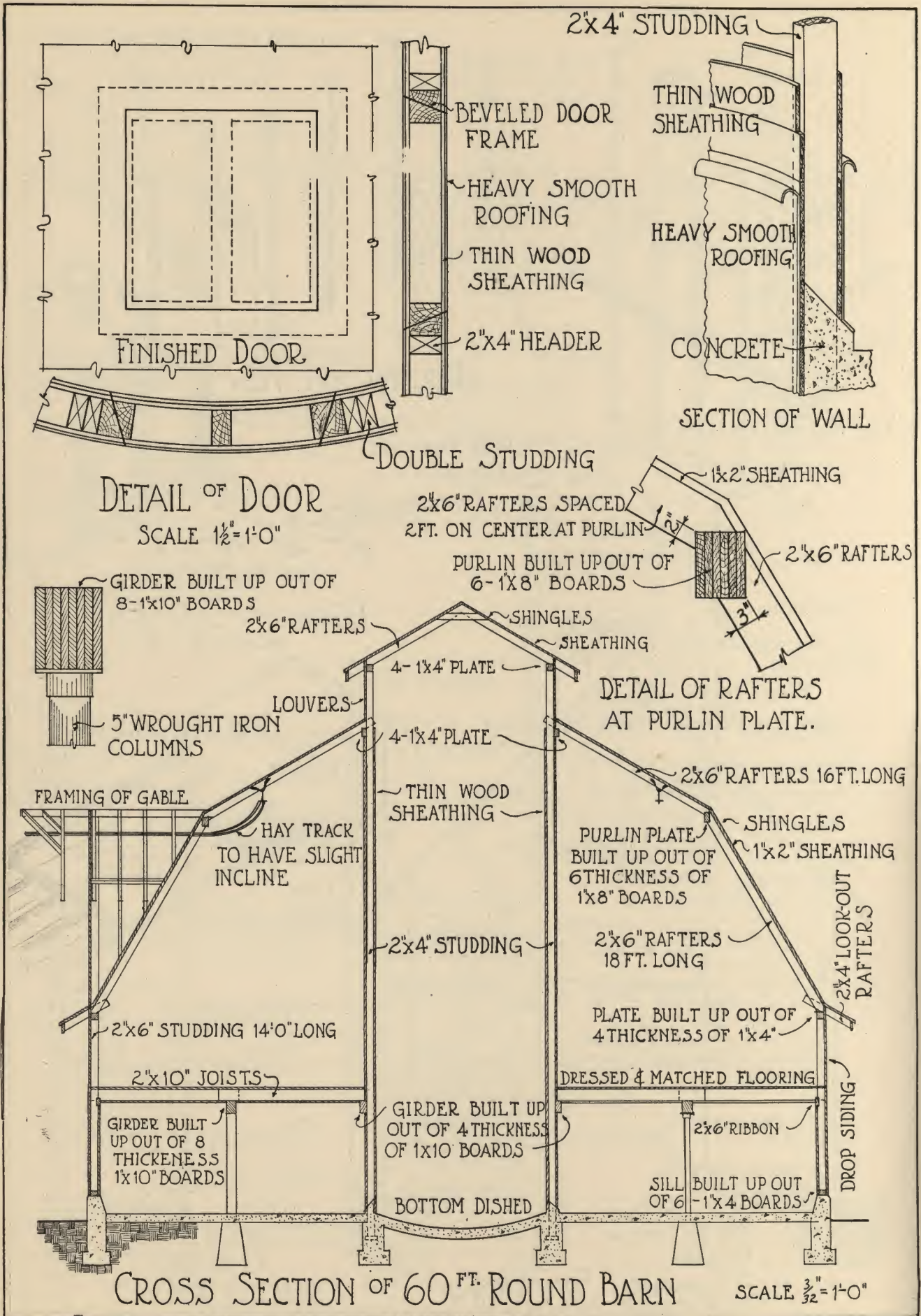
SECTION



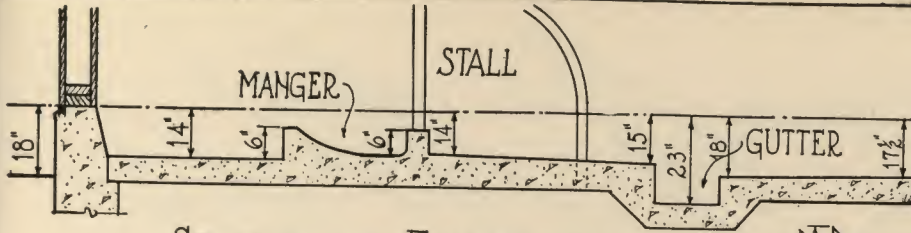
PLAN

GRANARY DETAILS
SCALES $\frac{1}{8}$, $\frac{1}{4}$ & $\frac{3}{8}$ = 1'-0"

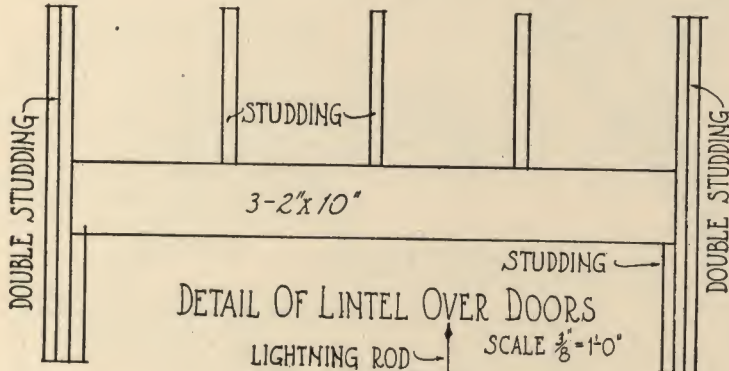




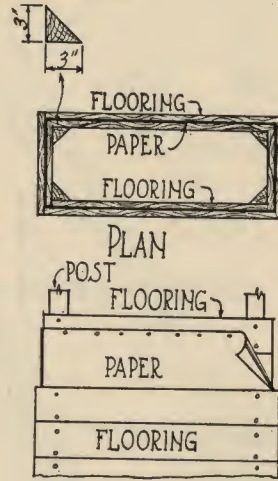
Details of Construction of 60-Foot Diameter Barn with Central Silo.



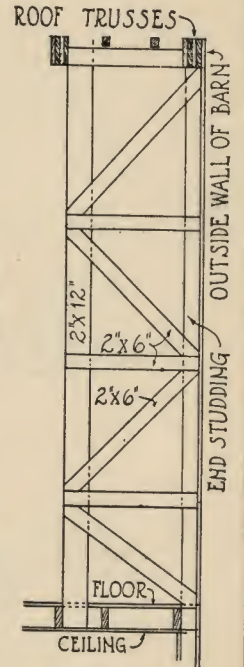
SECTION OF FLOOR SCALE $\frac{3}{8}$ "=1'-0"



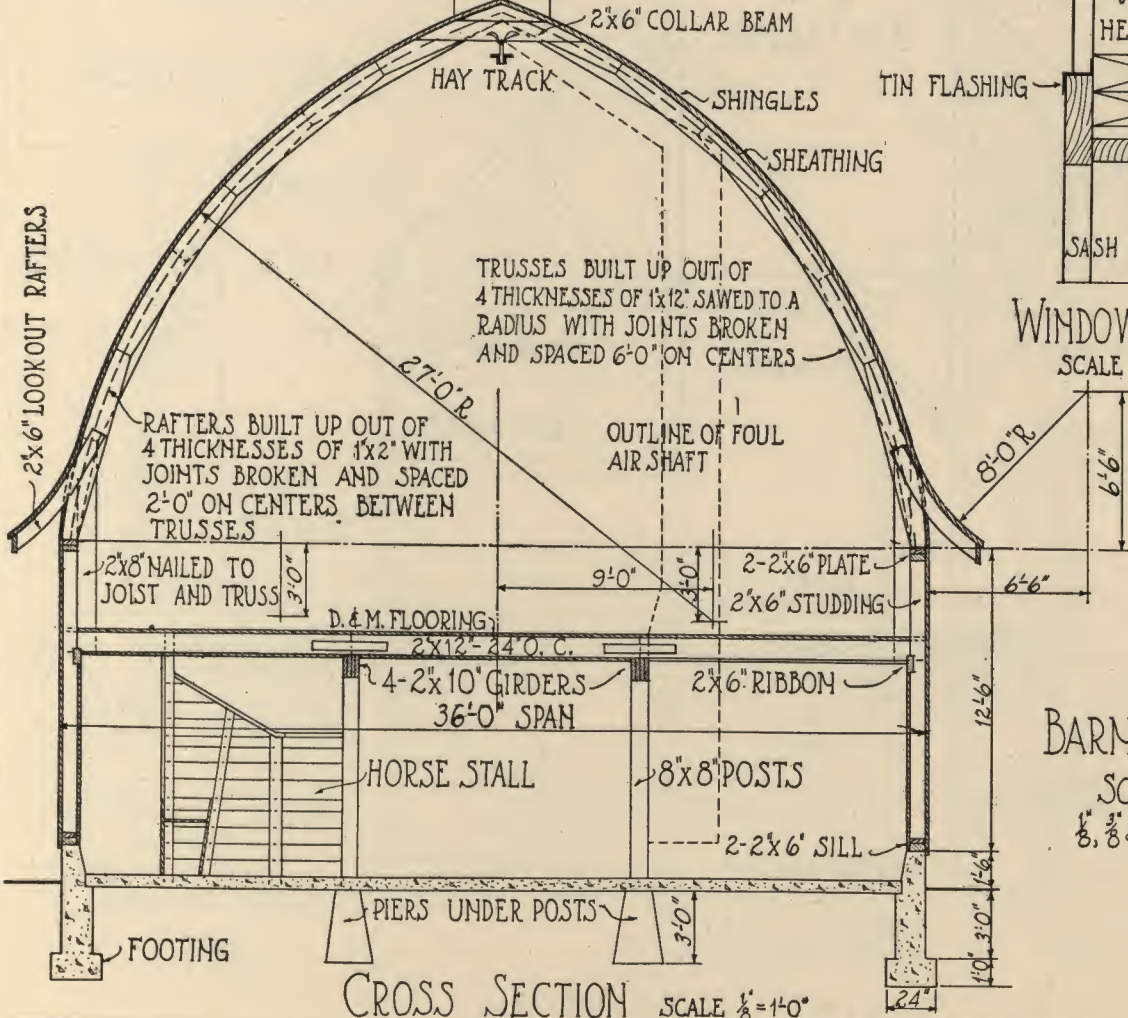
DETAIL OF LINTEL OVER DOORS SCALE $\frac{1}{8}$ "=1'-0"



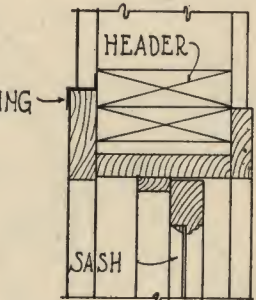
ELEVATION OF FOUL AIR SHAFT. SCALE $\frac{3}{8}$ "=1'-0"



END BRACE TWO IN EACH END. SCALE $\frac{1}{8}$ "=1'-0"

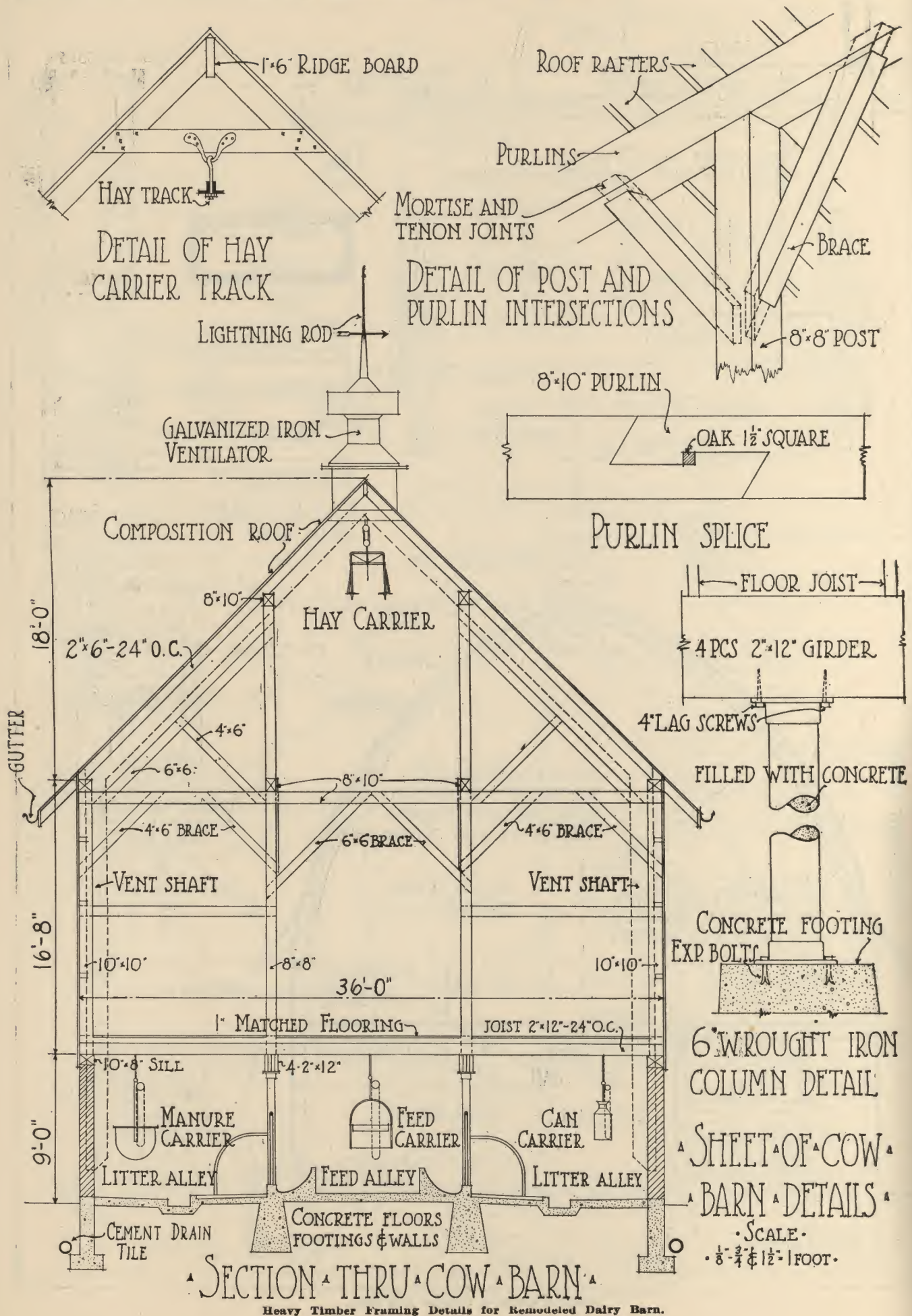


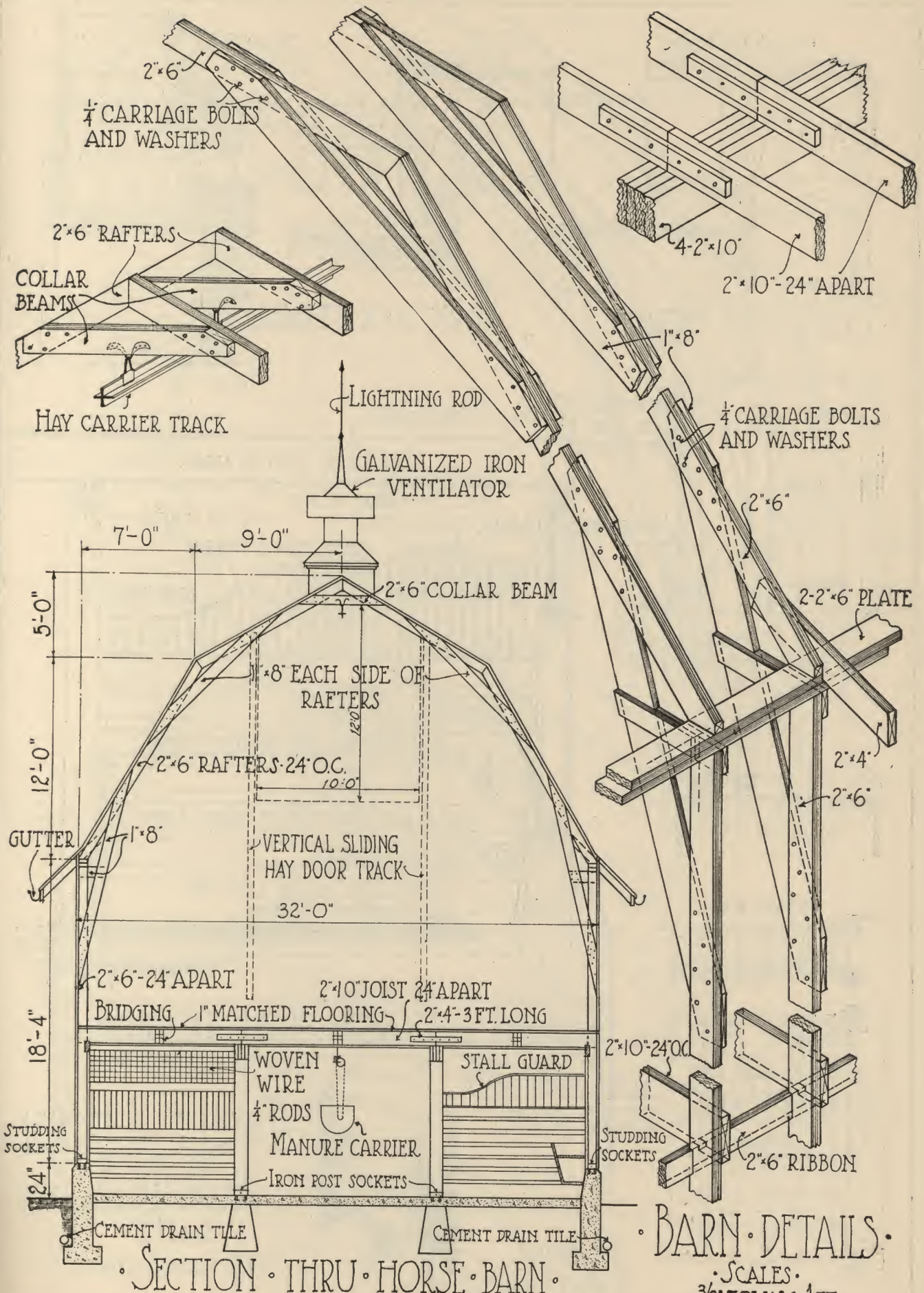
CROSS SECTION SCALE $\frac{1}{8}$ "=1'-0"



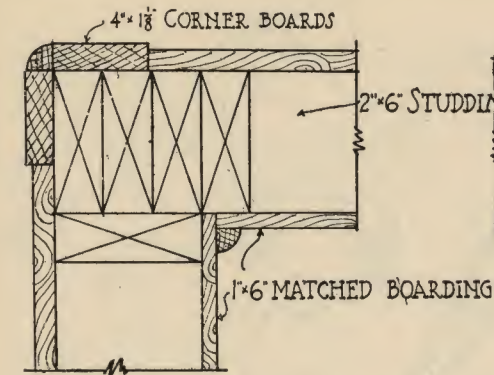
WINDOW HEAD SCALE $\frac{1}{2}$ "=1'-0"

BARN DETAILS
SCALES
 $\frac{1}{8}$, $\frac{3}{8}$ & $\frac{1}{2}$ "=1'-0"

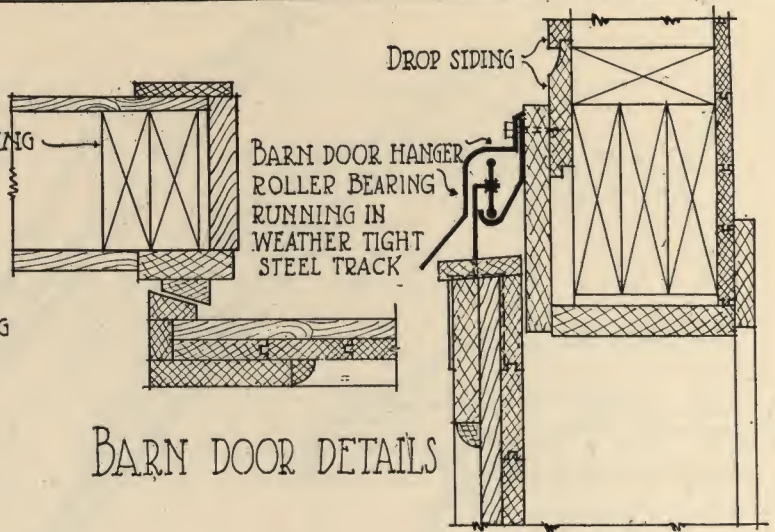




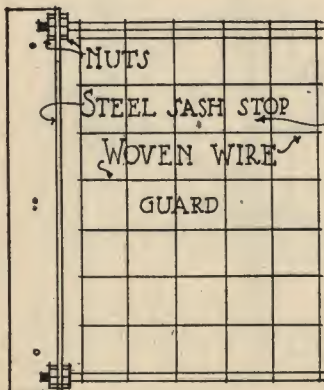
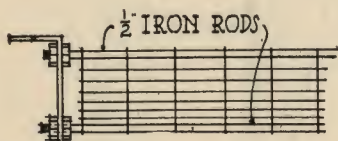
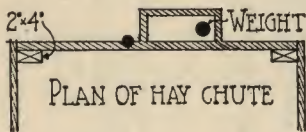
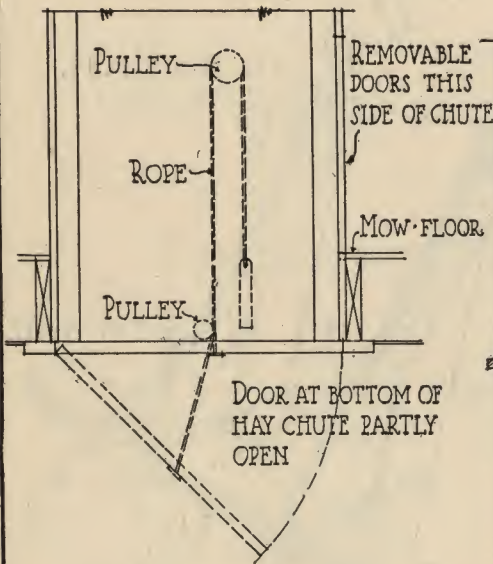
Details of Horse Barn. Roof is Self-Supporting Plank Frame Construction of the Type Where Every Rafter Forms a Truss. Rafters Spaced on 24-Inch Centers.



CORNER POST DETAILS

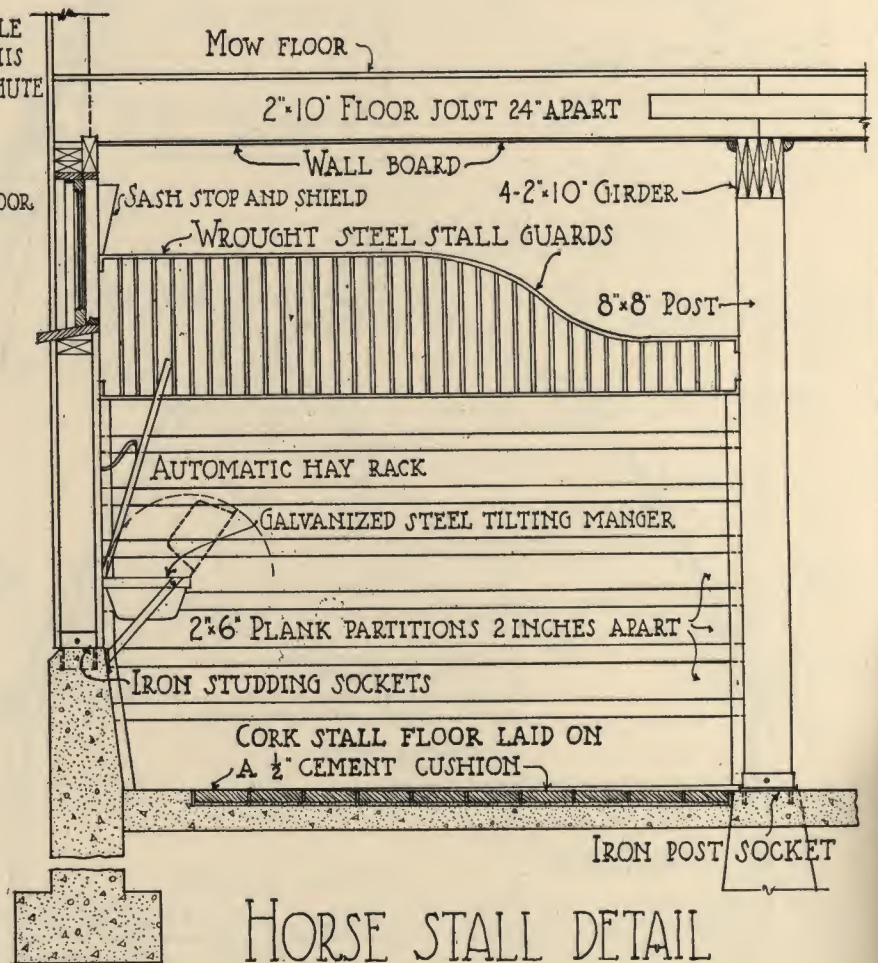


BARN DOOR DETAILS

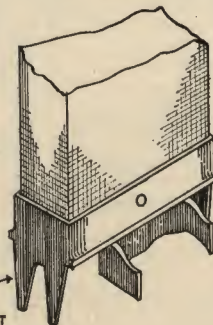


SASH STOP AND
SHIELD DETAIL

STUDDLING
SOCKET DETAIL



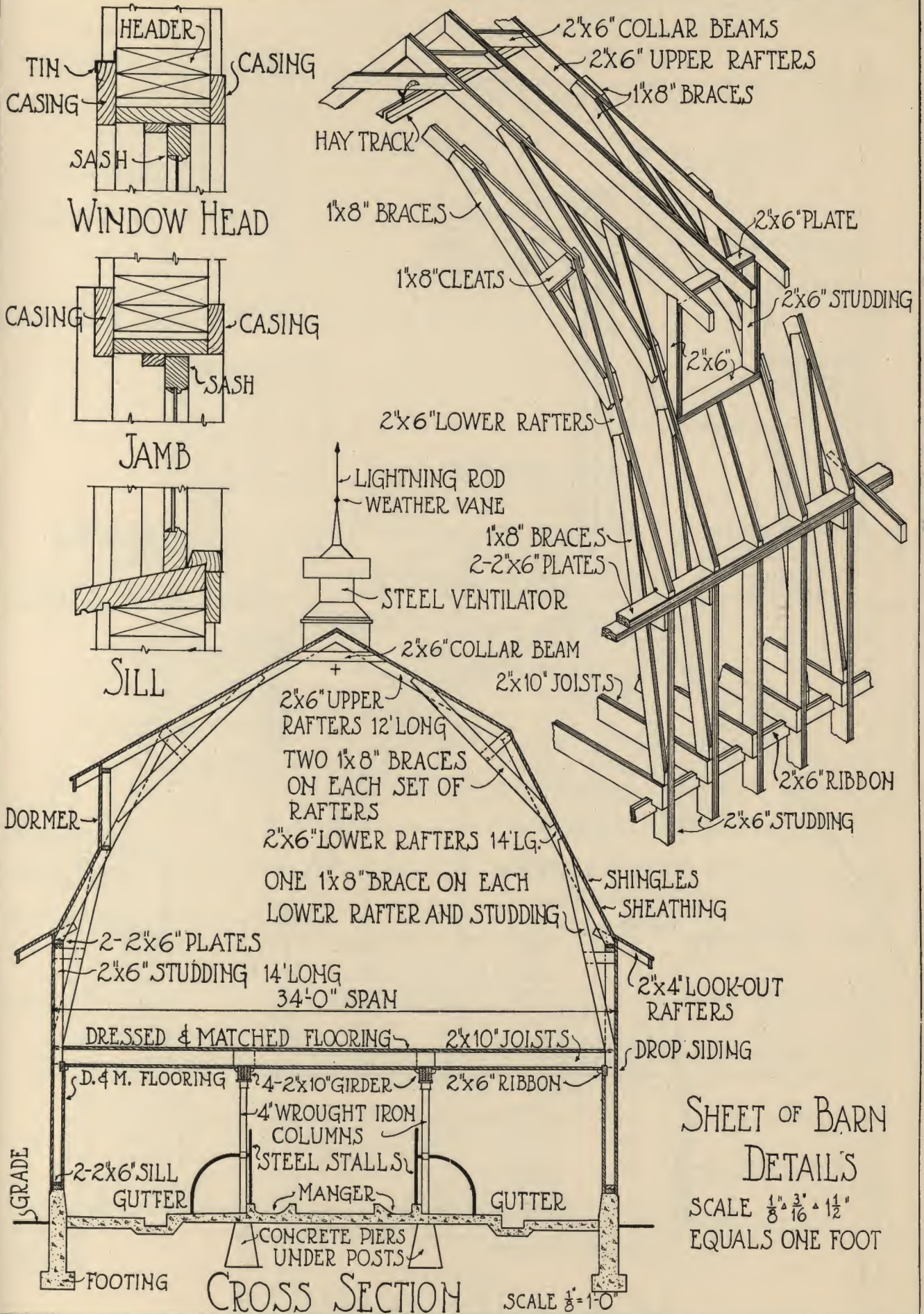
HORSE STALL DETAIL



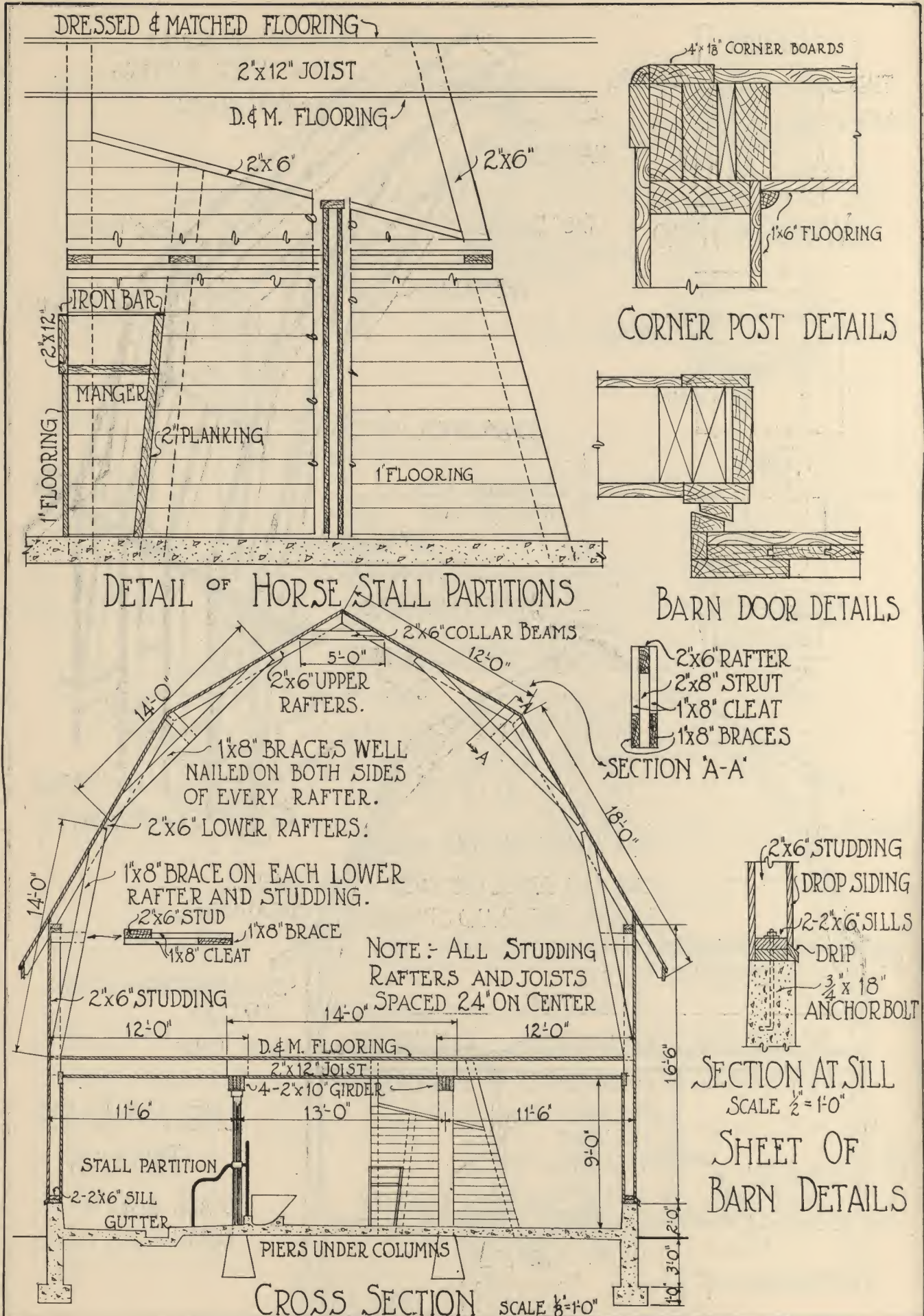
SHEET of HORSE
BARN DETAILS

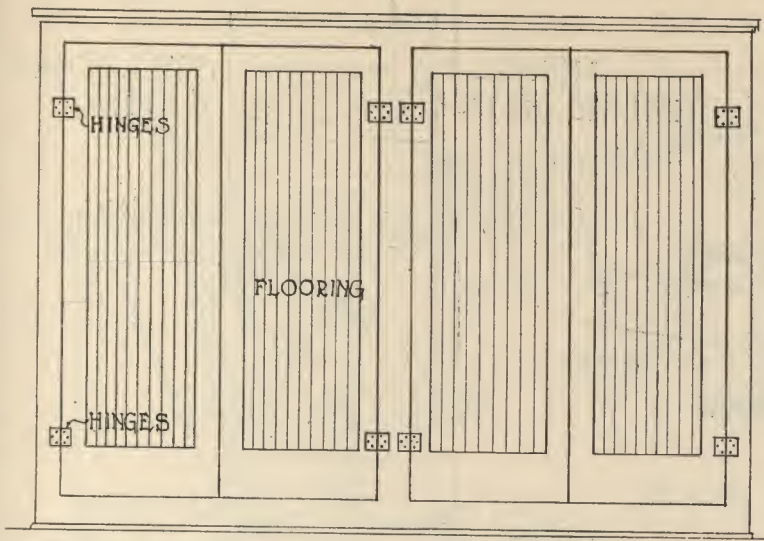
SCALES

1 1/2" & 3/8" EQUALS 1 FOOT

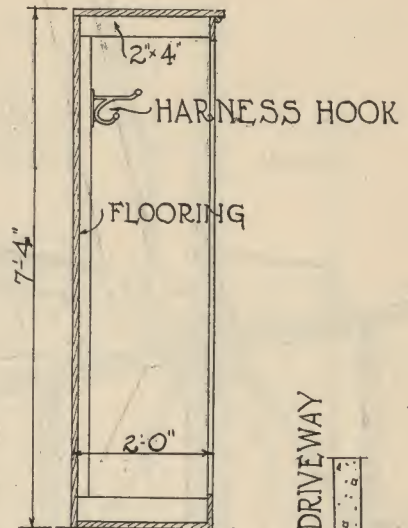


Details of Construction Drawn to Exact Scale of Gambrel Roof Barn with Dormers.

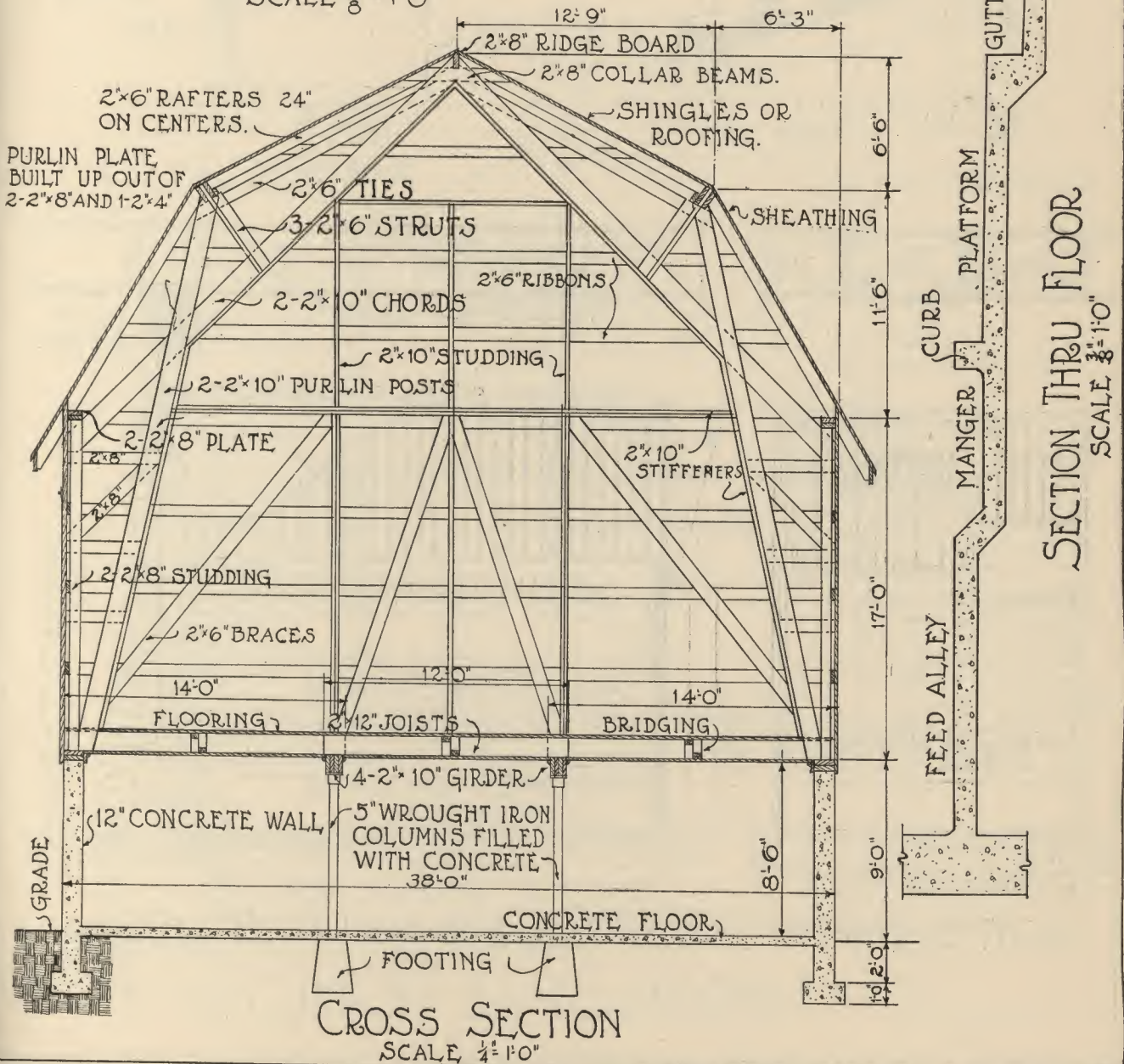




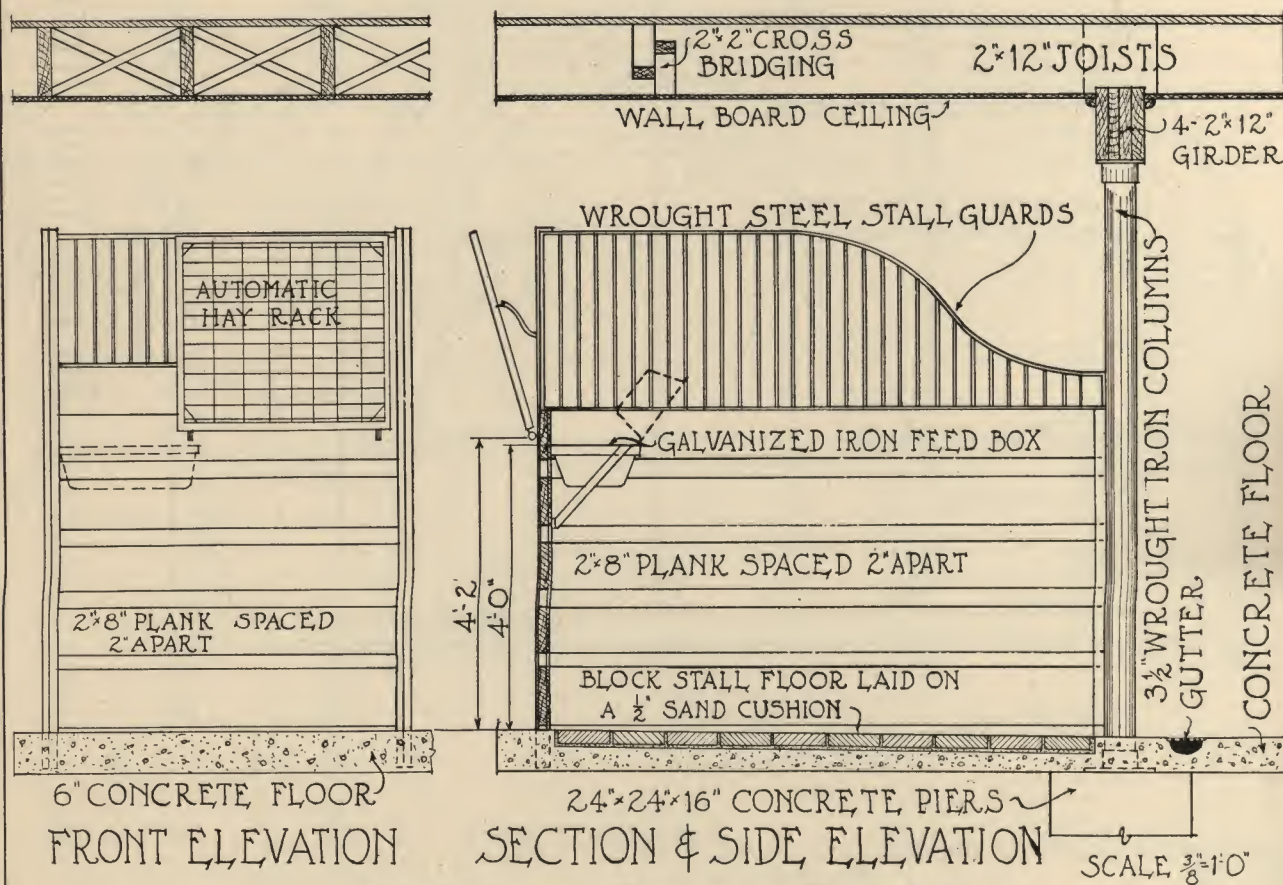
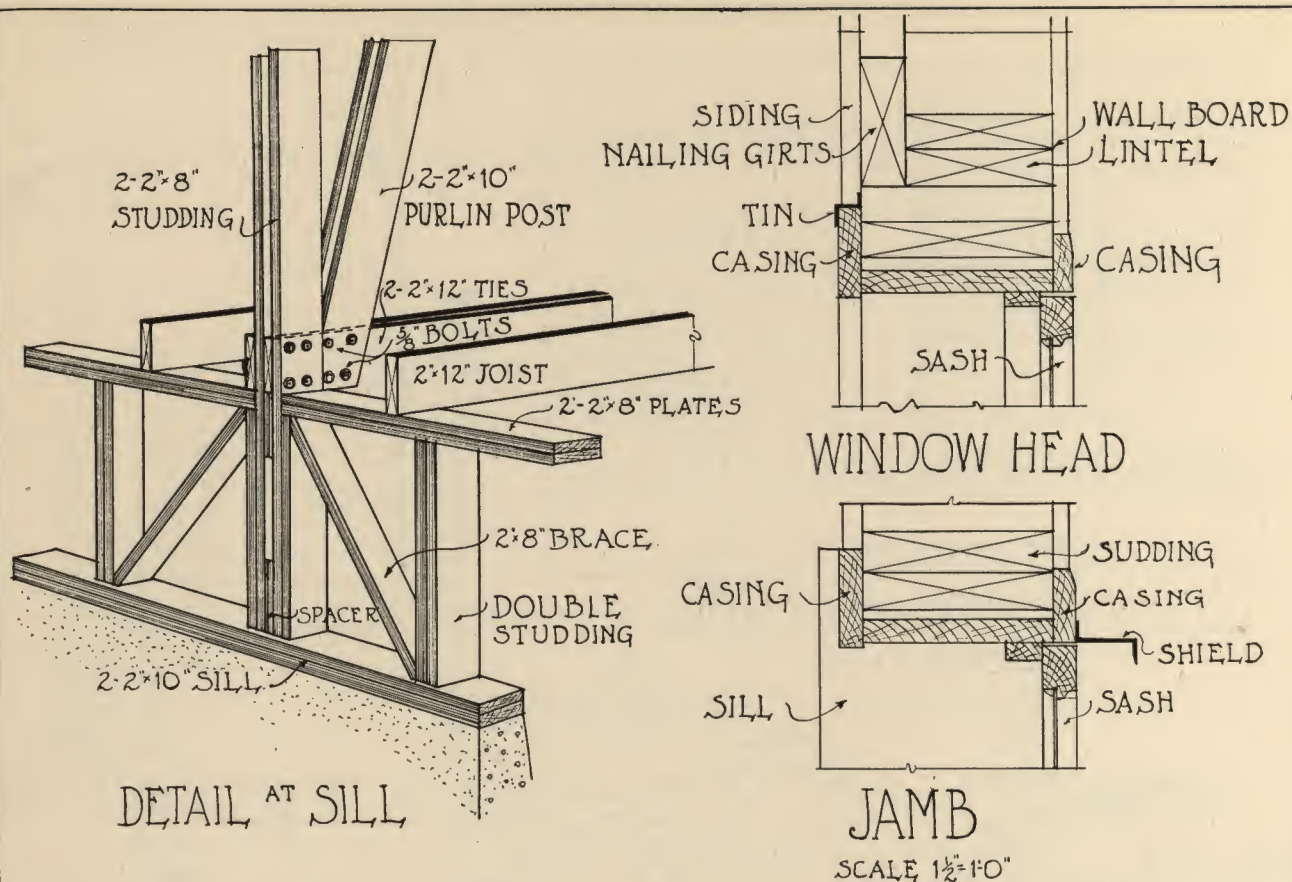
ELEVATION OF HARNESS CABINET
SCALE $\frac{3}{8}'' = 1'-0''$



SECTION

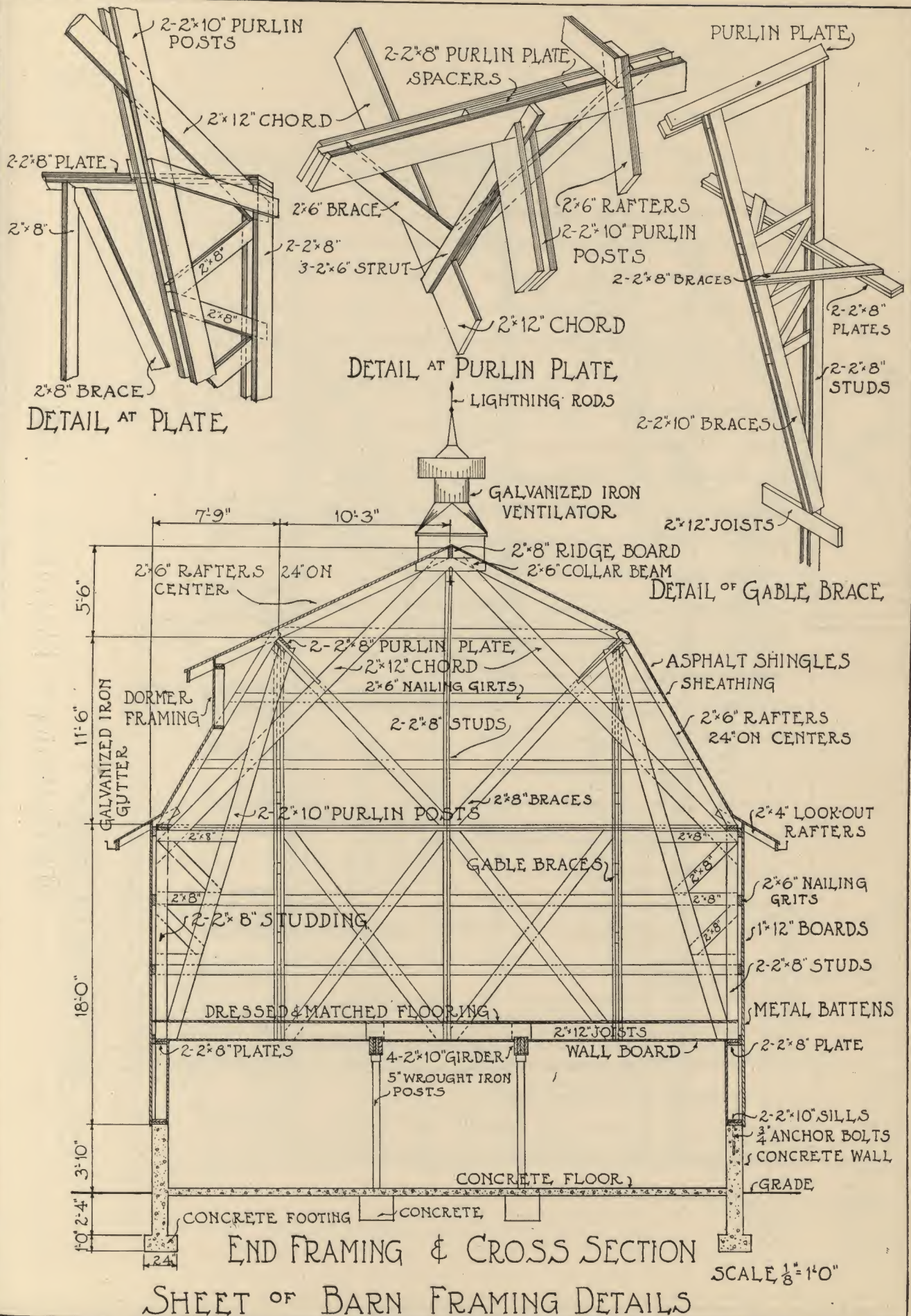


Cross-Section Thru Self-Supporting Gambrel Roof of Barn, Showing Also End Framing. Roof Trusses Are Spaced About 12 Feet Apart.

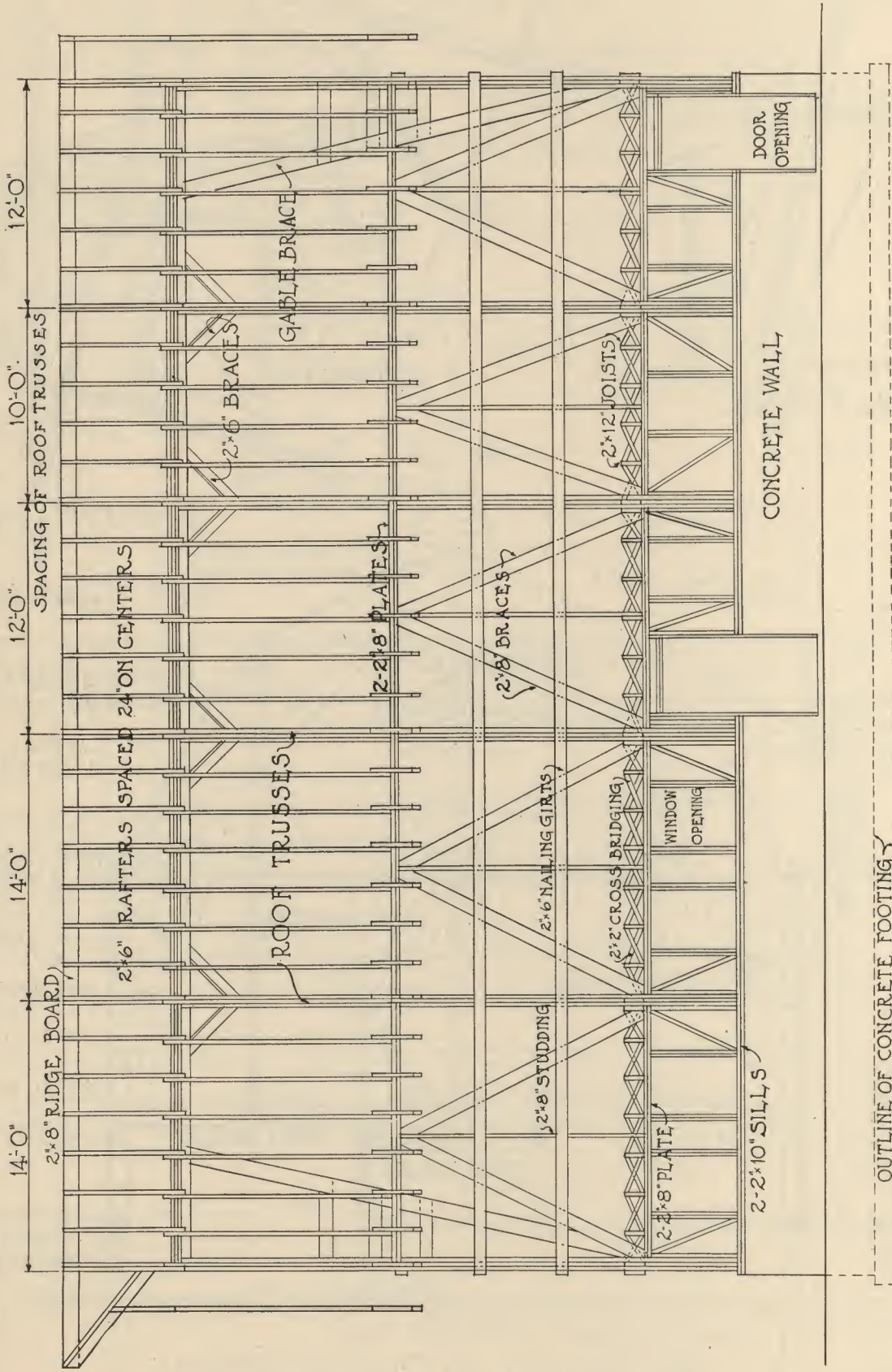


HORSE STALL DETAILS

Details of Horse Stable Part of Combination Barn. Note Improved Stall Flooring of Creosoted Blocks Laid on the Concrete. Plank Frame Construction at Sill Also Clearly Shown.



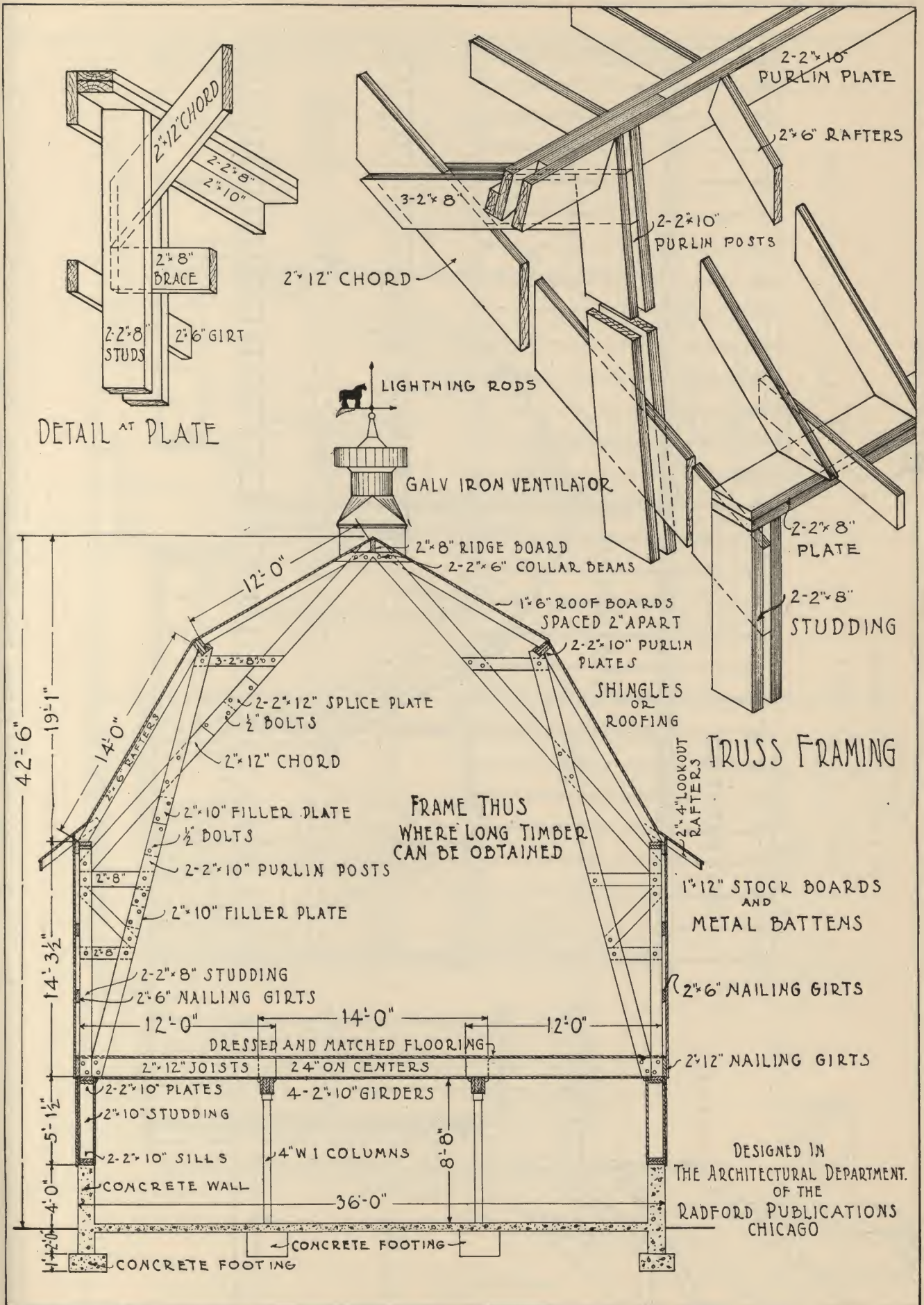
NOTE:- THIS TYPE OF TRUSS CAN
BE SPACED FROM 10 TO 14 FT. ON
CENTERS.



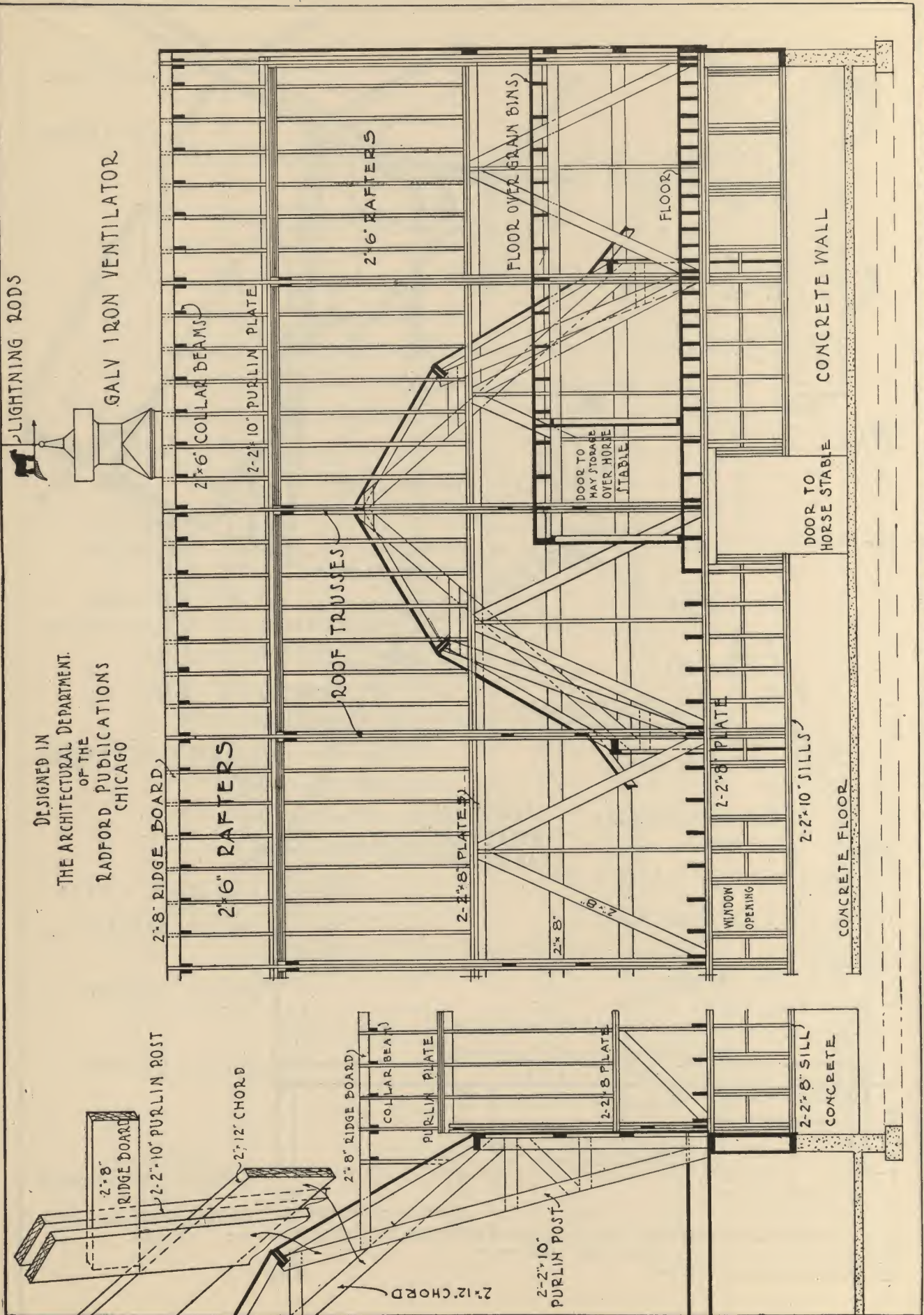
SIDE FRAMING OF TWO STORY BARN

SCALE 1/8" = 1'-0"

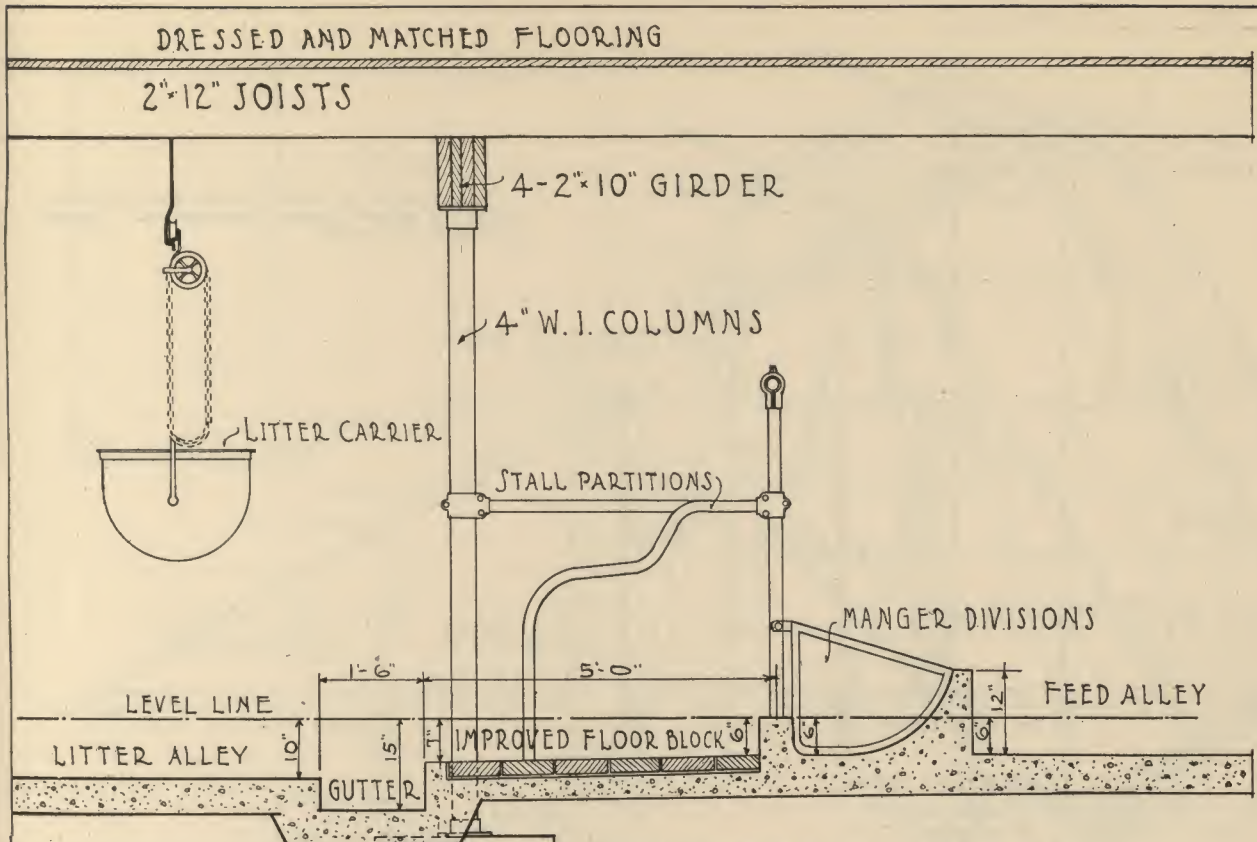
Side Framing Detail of Gambrel Roof Horse and Storage Barn. Note That Plank Frame Trusses Are Set from 10 to 14 Feet Apart to Work Out Right with the Floor Plan.



Cross-Section Thru Gambrel Roof Barn. This Is an Example of Radford's Standardized Plank Frame Construction, Making Use of 2-Inch Plank Carried Regularly in Stock at All Lumber Yards.

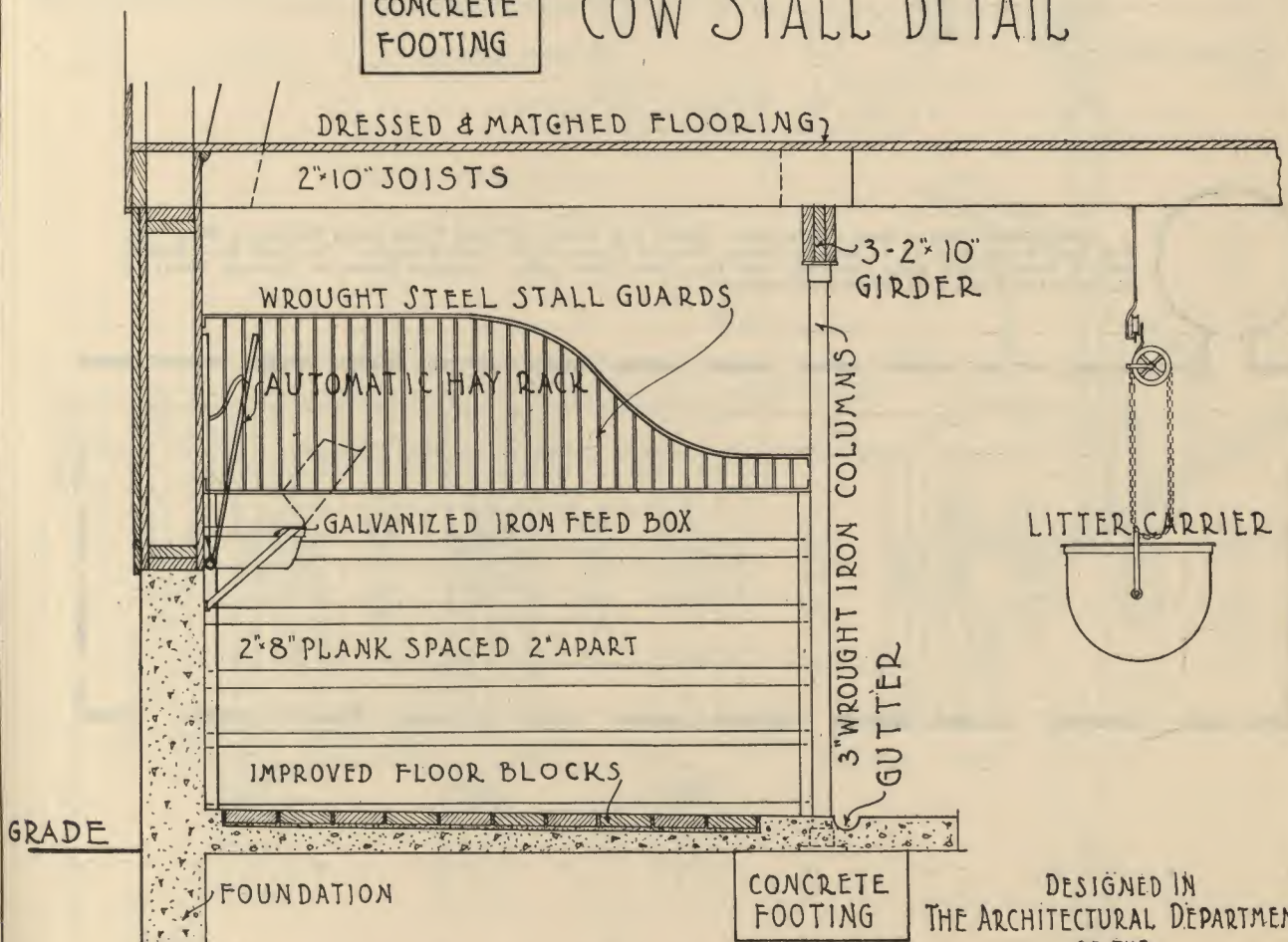


Longitudinal Section Thru Big Gambrel Roof Barn. This View Shows Intersection of Horse Stable Wing with Main Section. Notice How Passageway in Hay Mow is Formed Across the Center of the Barn to Make All Parts of the Mow Accessible, Even When the Center is Filled.



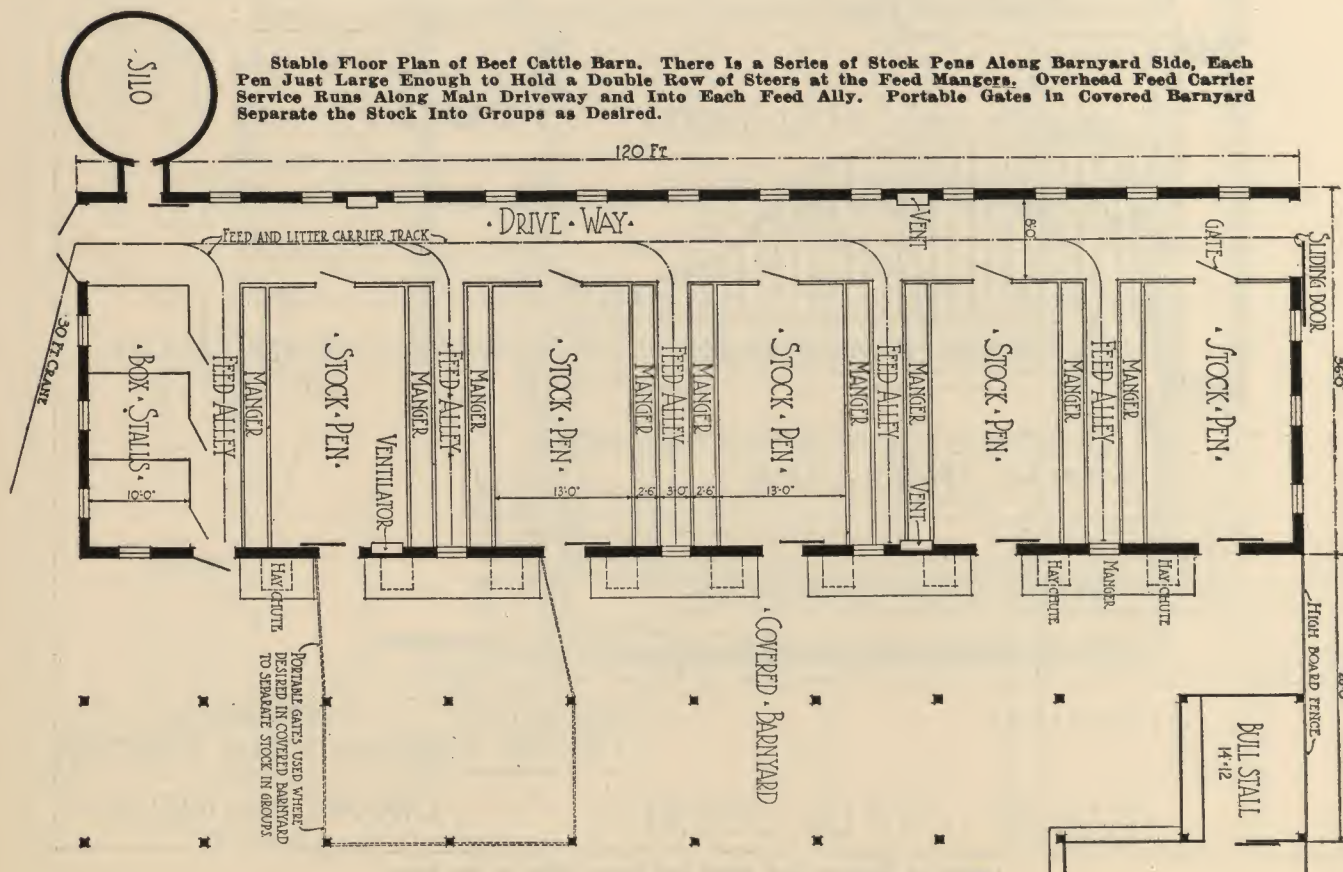
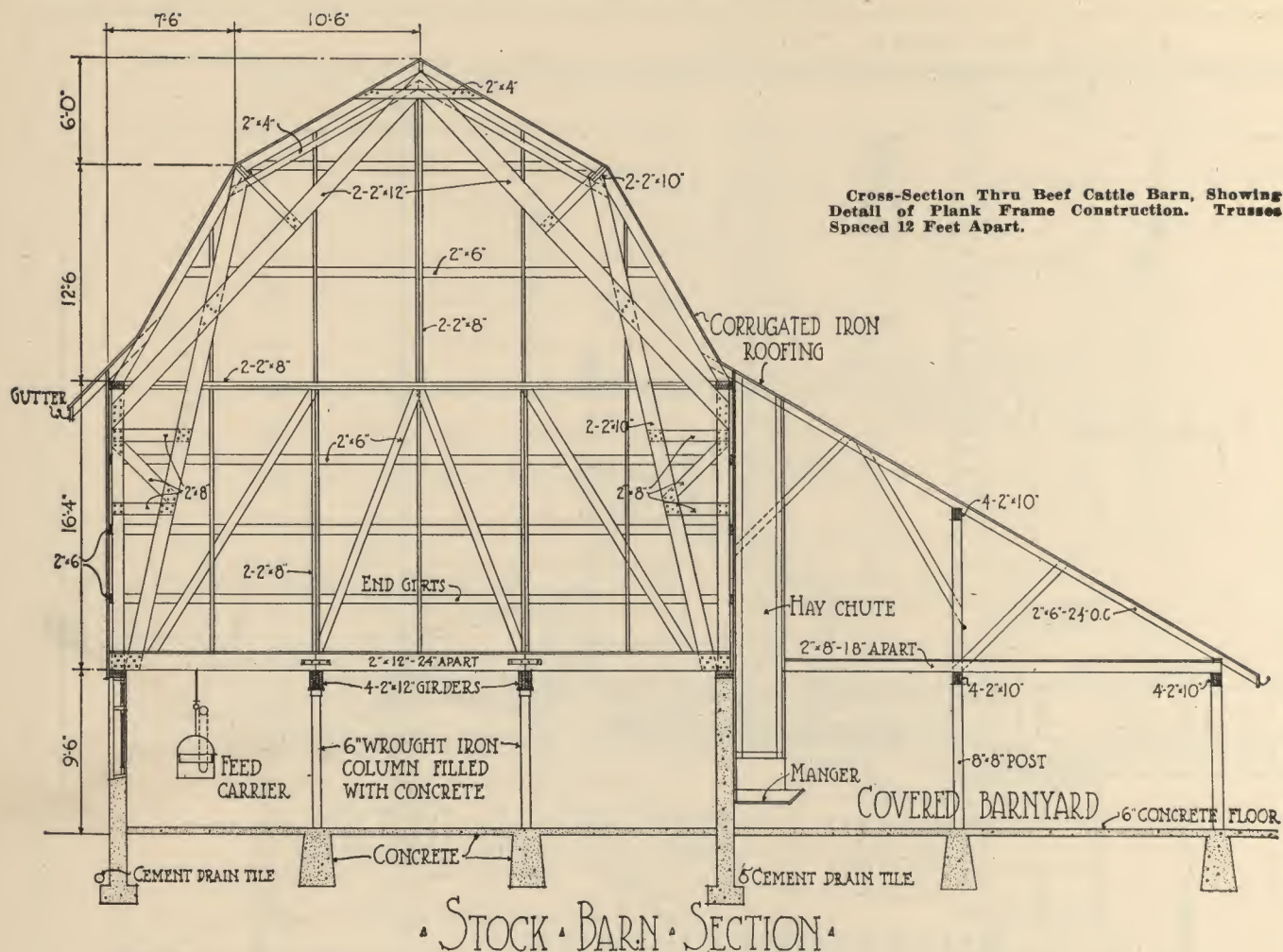
CONCRETE
FOOTING

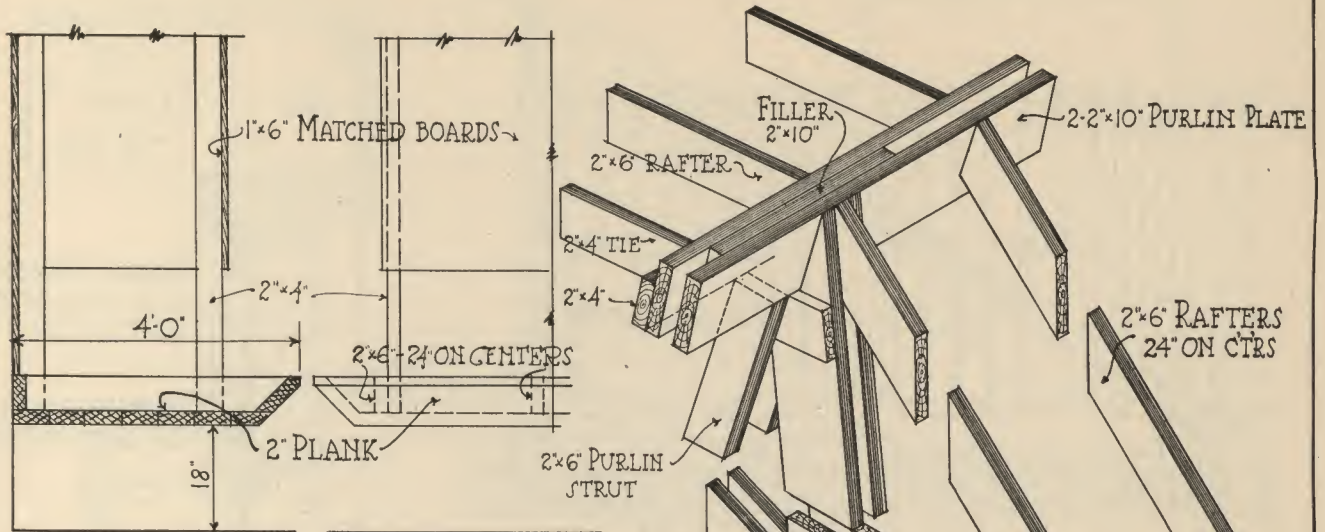
COW STALL DETAIL



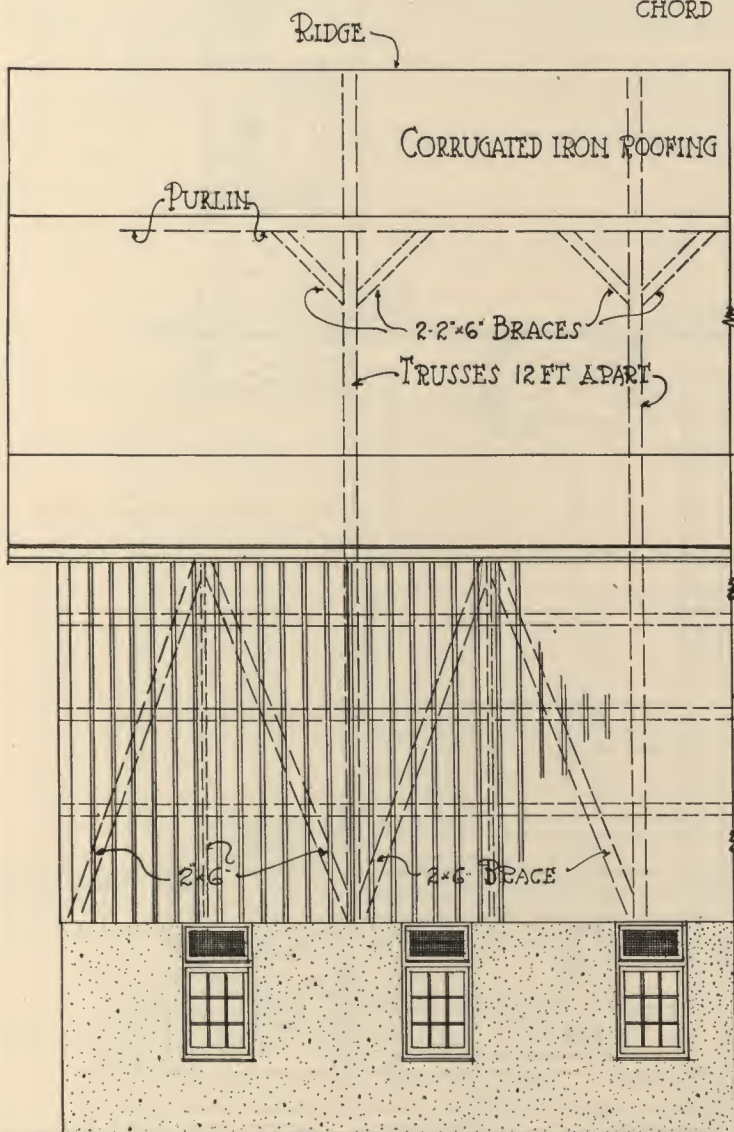
HORSE STALL DETAIL

DESIGNED IN
THE ARCHITECTURAL DEPARTMENT
OF THE
RADFORD PUBLICATIONS
CHICAGO





HAY CHUTE AND MANGER



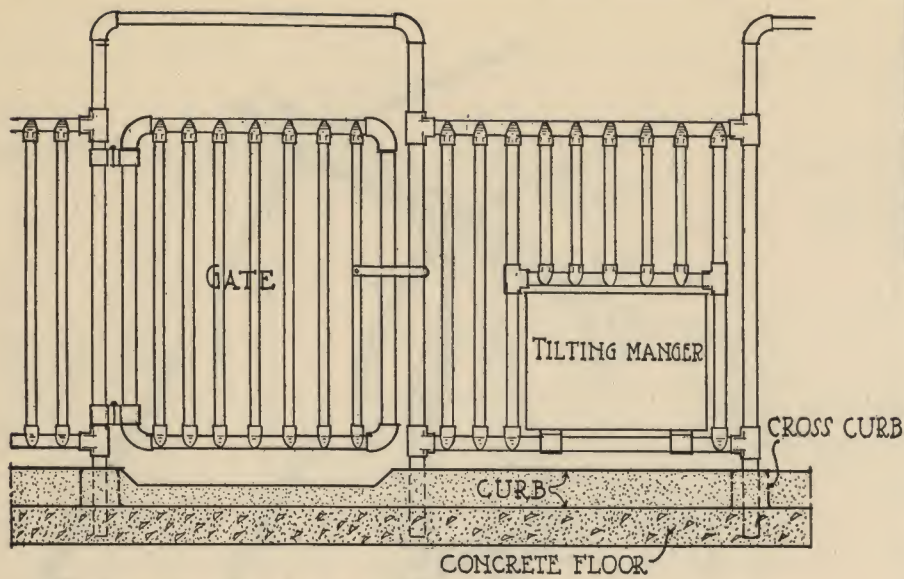
STOCK BARN FRAMING ELEVATION

TRUSS DETAIL

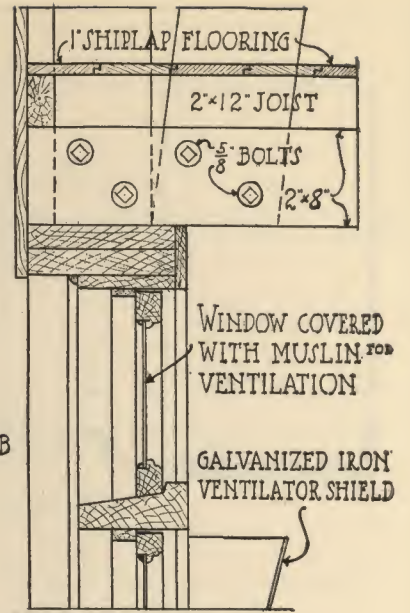
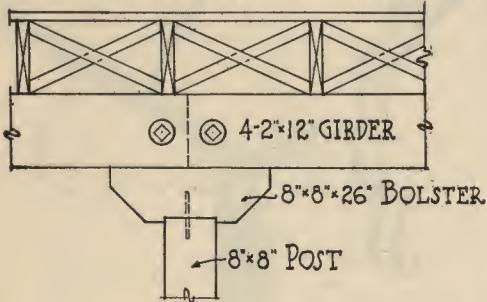
STOCK FEEDING

BARN DETAILS

SCALE: 1/8" = 1/4" = 1 FT.



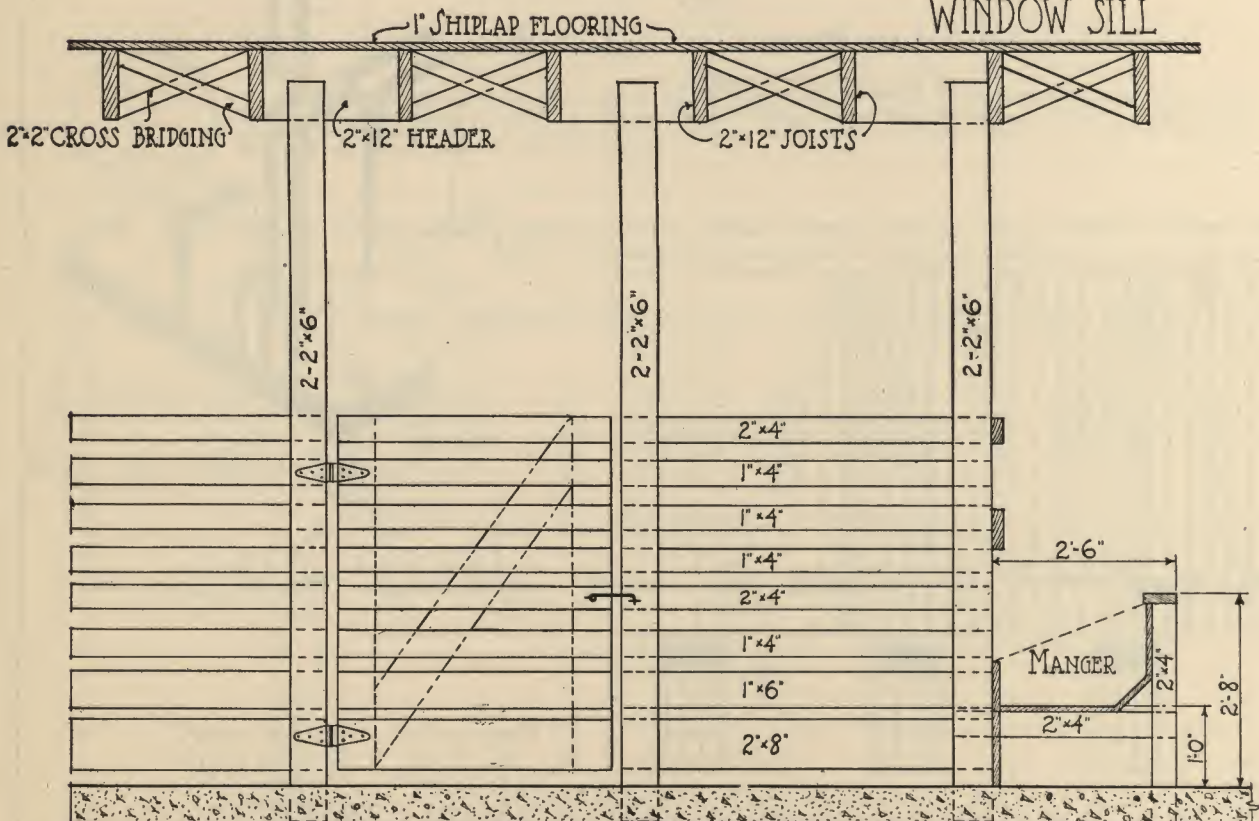
ELEVATION of BOX STALLS



WINDOW HEAD



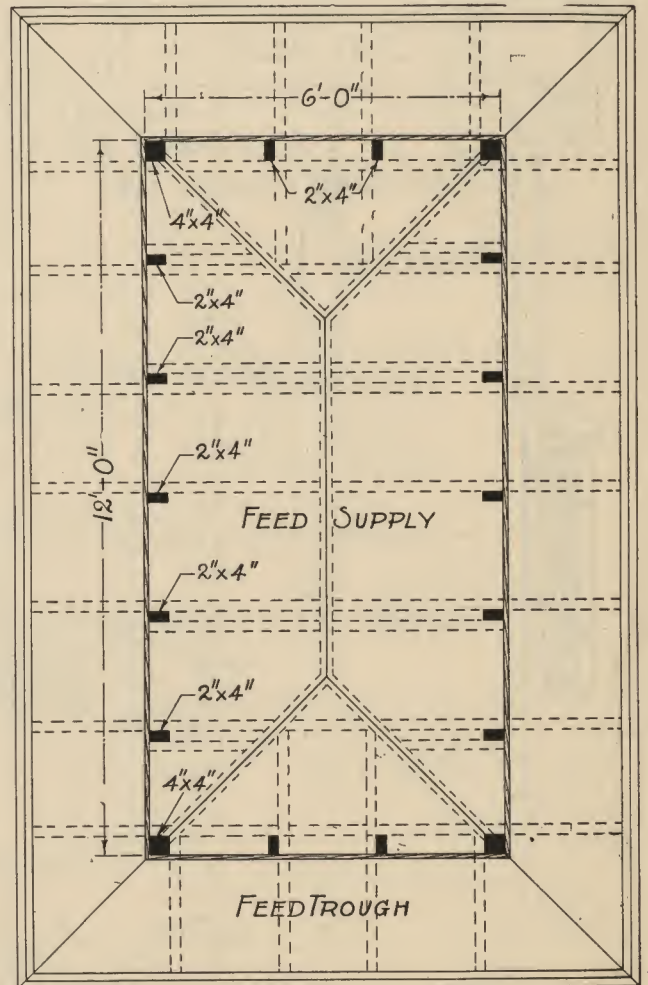
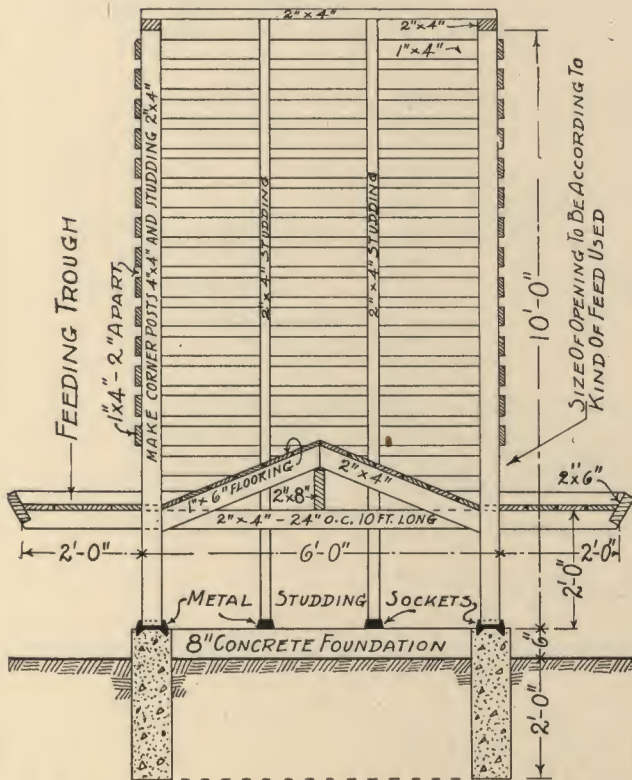
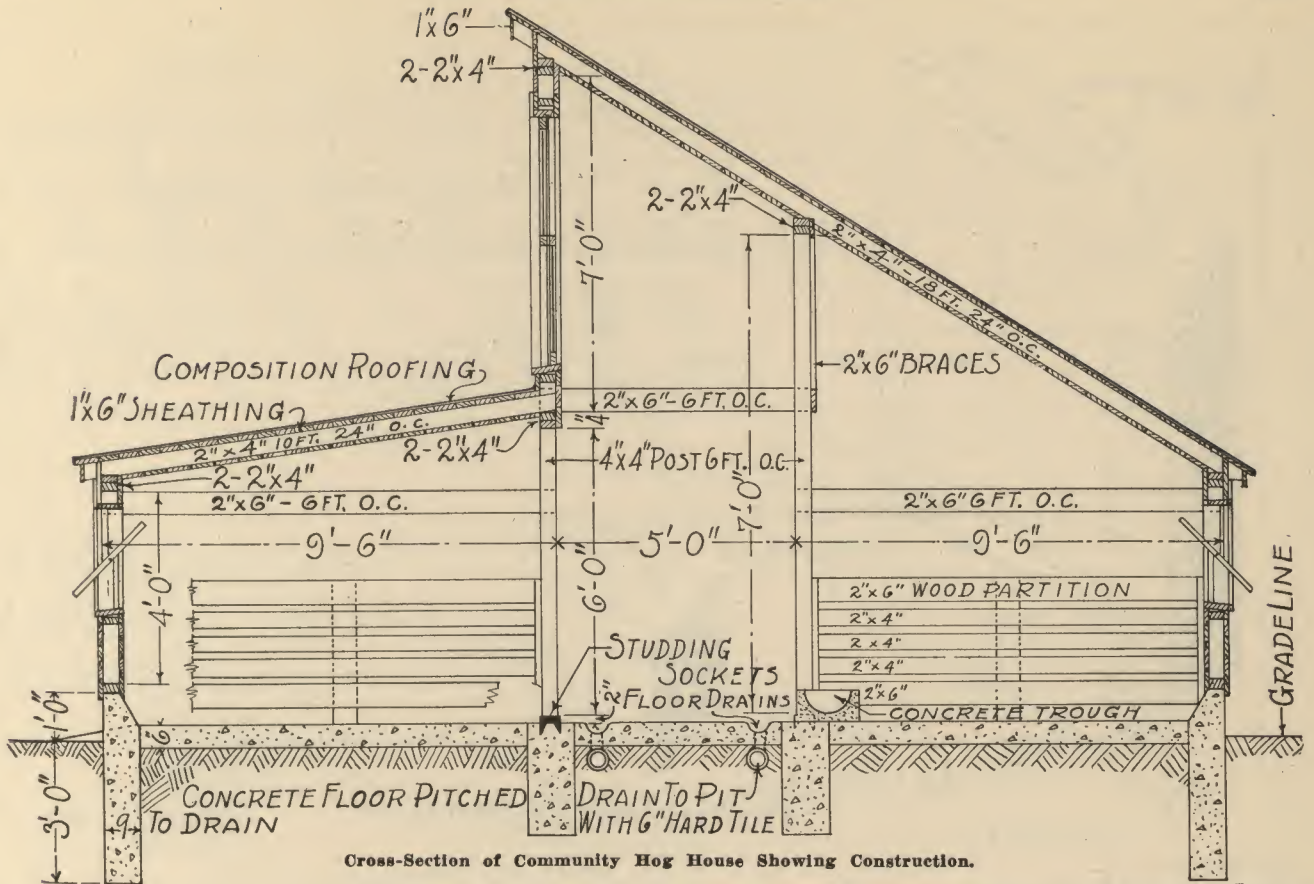
WINDOW SILL



ELEVATION of STOCK PEN AND DETAILS IN STOCK BARN

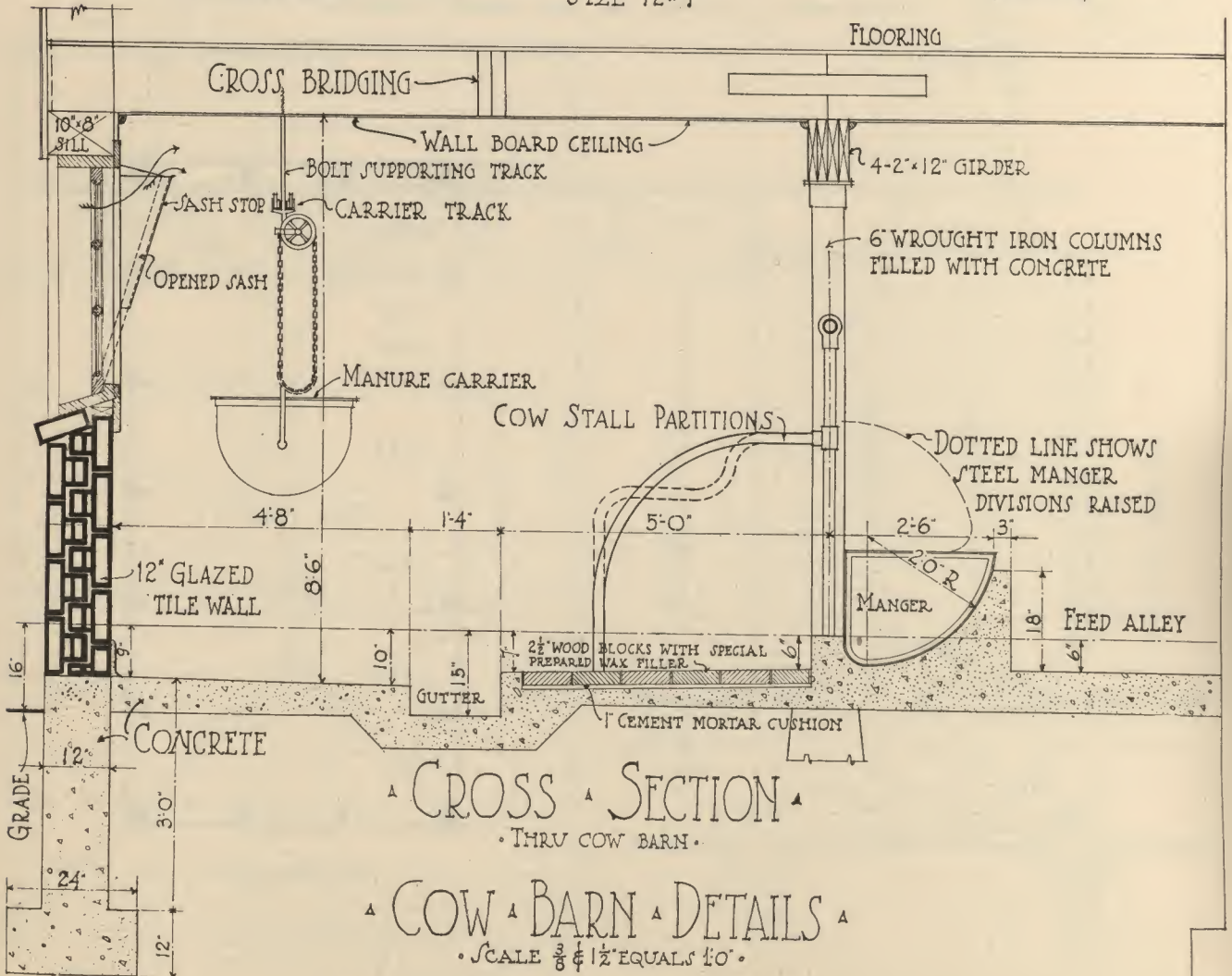
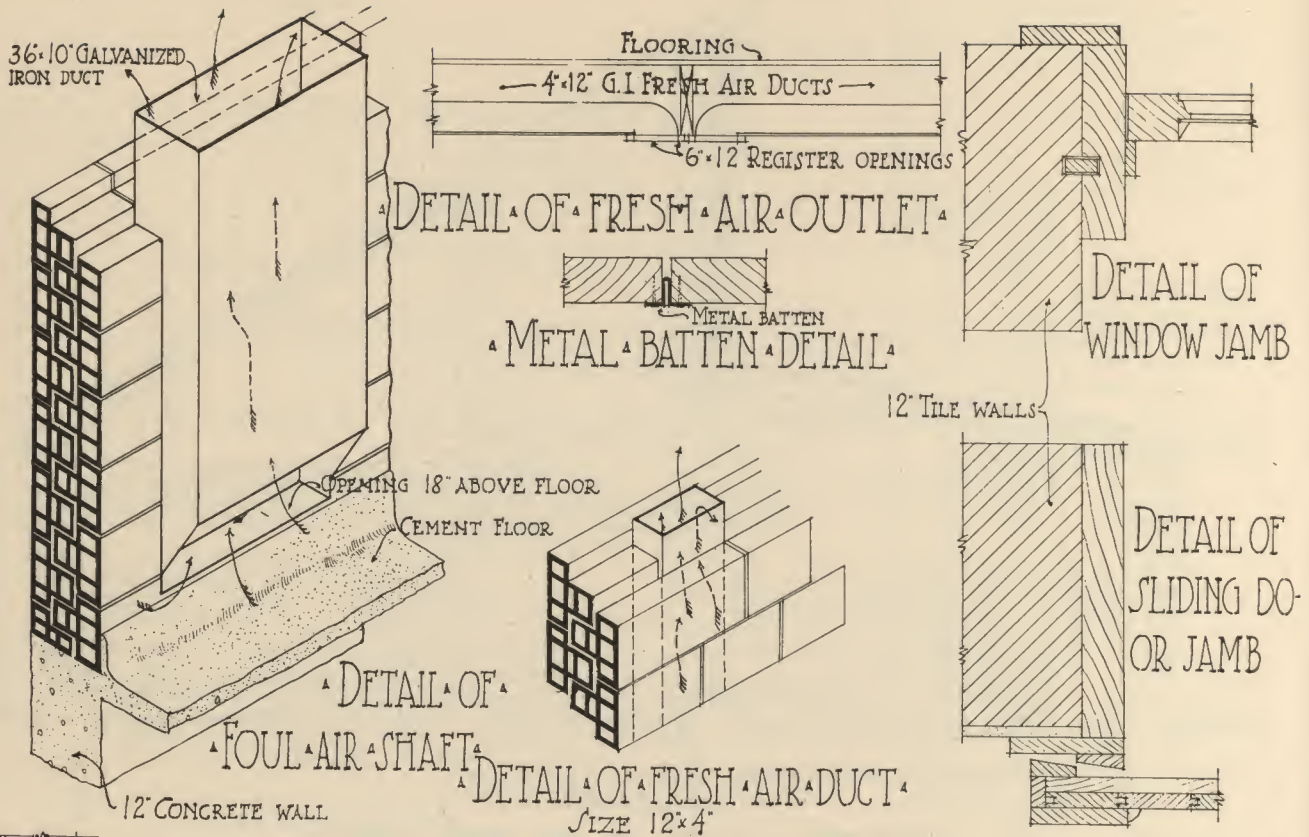
• SCALES $\frac{3}{8}$ " & $\frac{3}{4}$ " = 1'-0" •

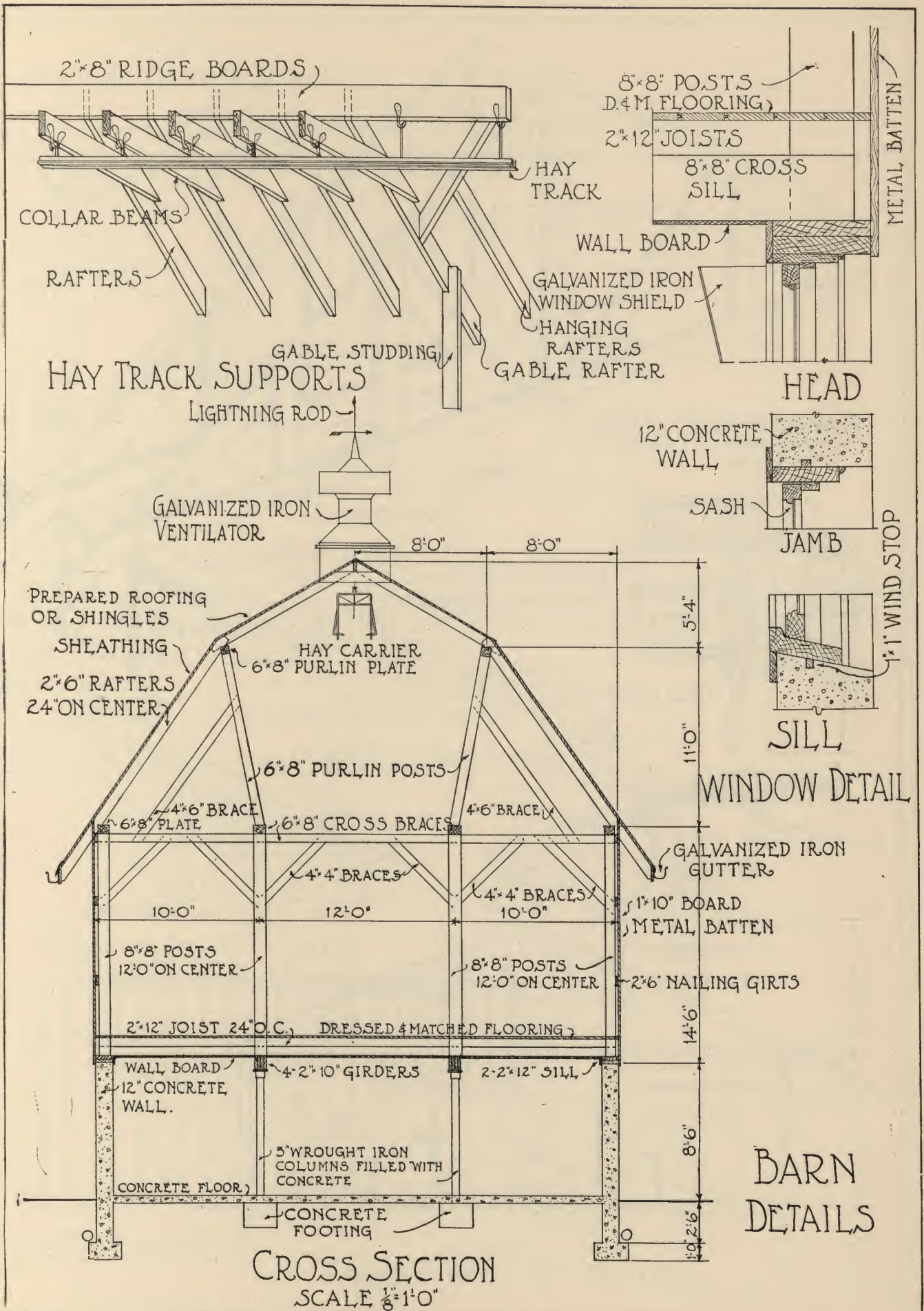
Details of Stock Pens, Etc., for Beef Cattle Barn.

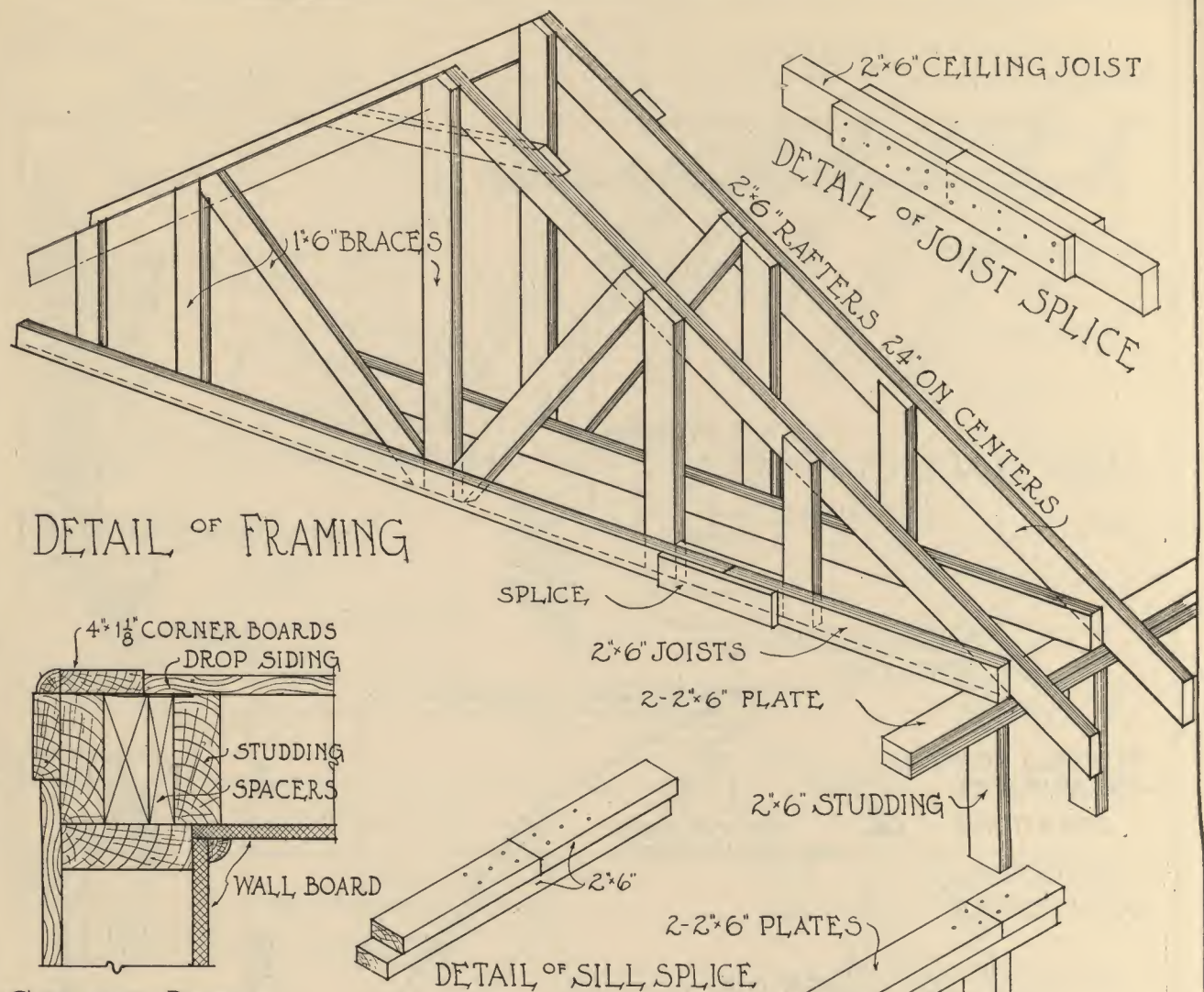


Cross Section Of Self Feeder

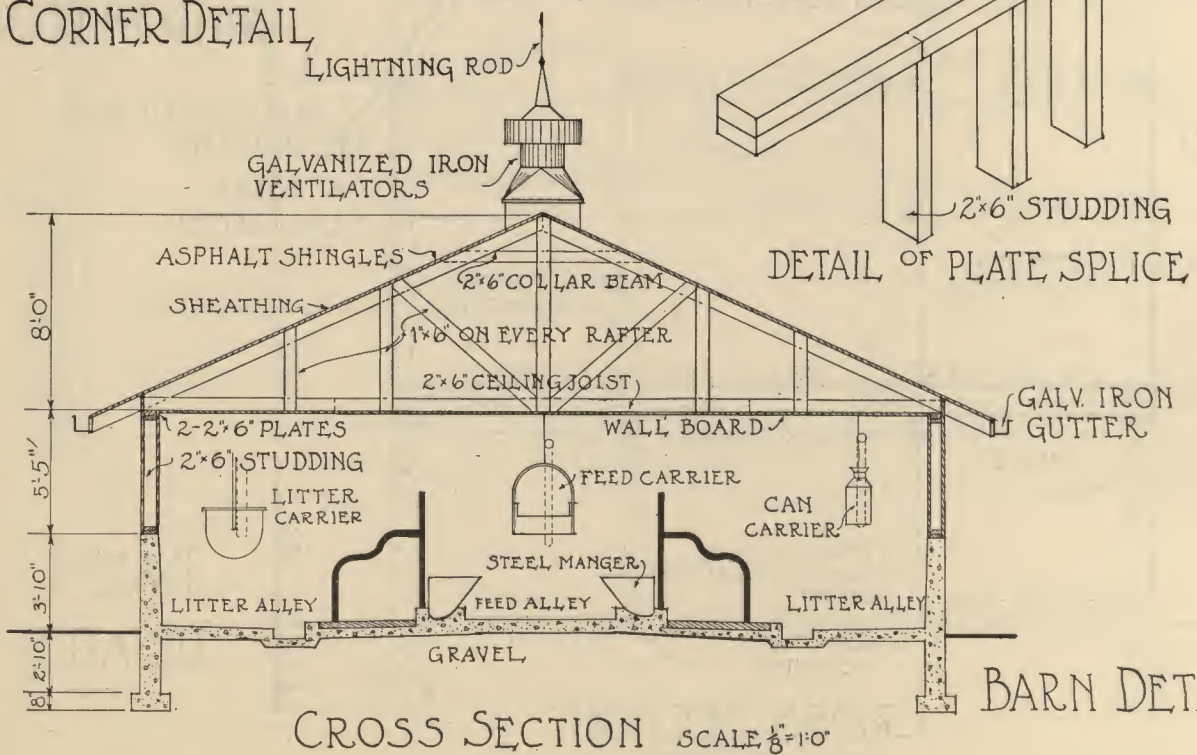
Framing Plan Of Self Feeder

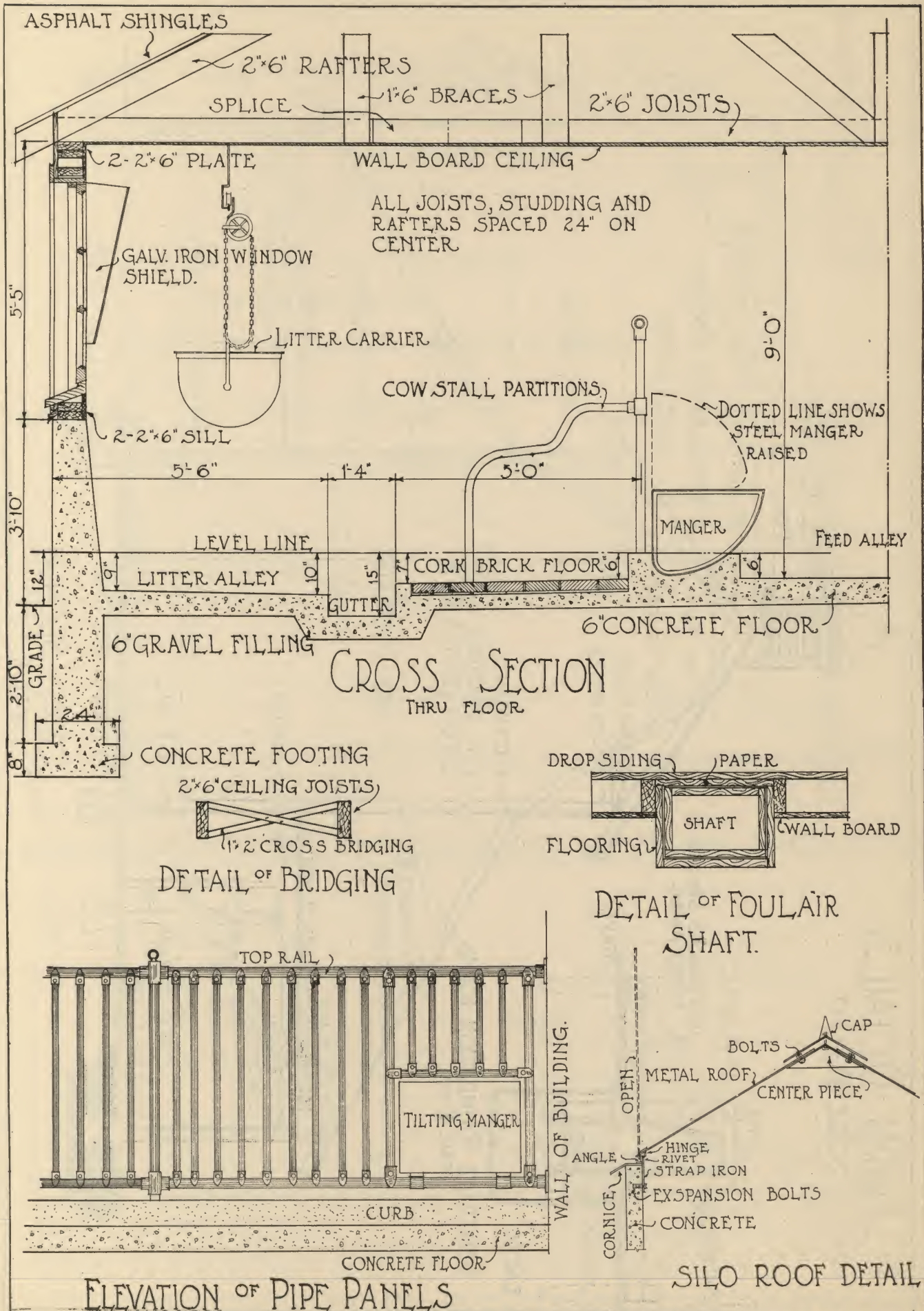






CORNER DETAIL

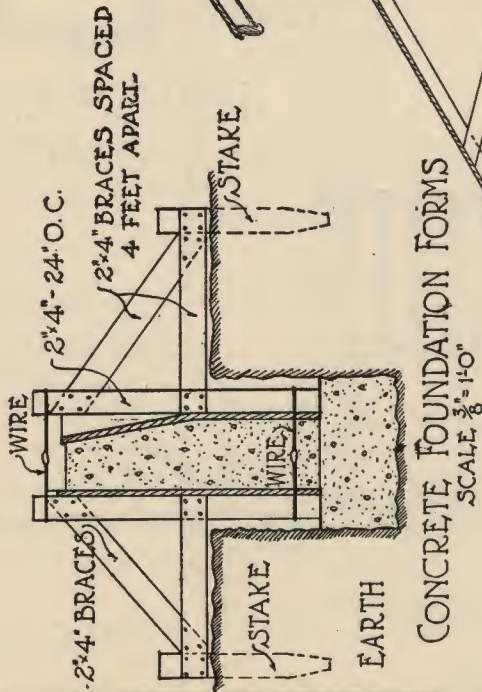




Details of Dairy Stable. Note How Cow Stalls Are Floored with Cork Brick. Cow Stall Partitions and Pens of Metal Piping Also Specified. Note Improved Silo Roof Details, Which Shows How to Put on an Extension Metal Roof.

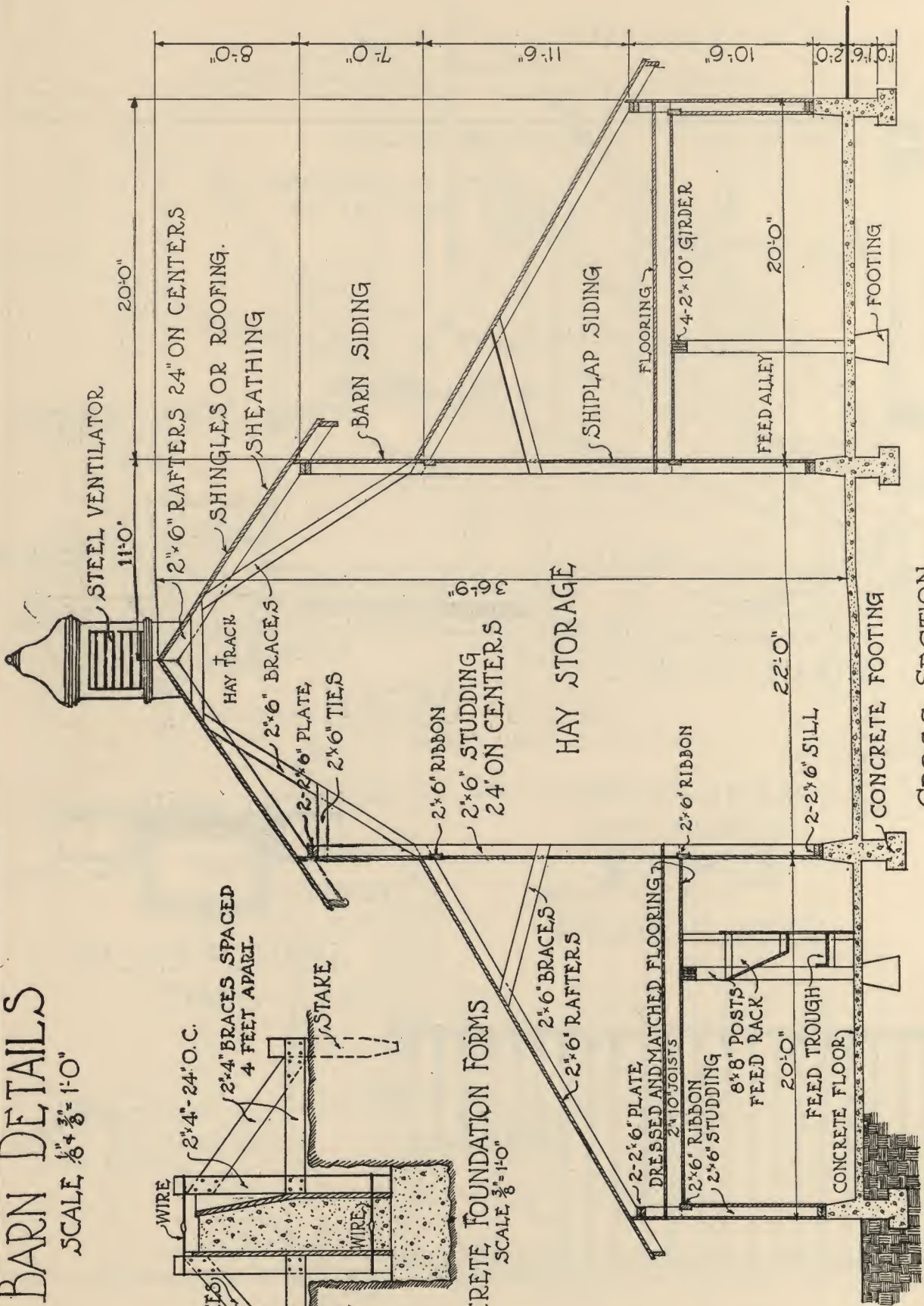
BARN DETAILS

SCALE $\frac{1}{8}" = 1'-0"$



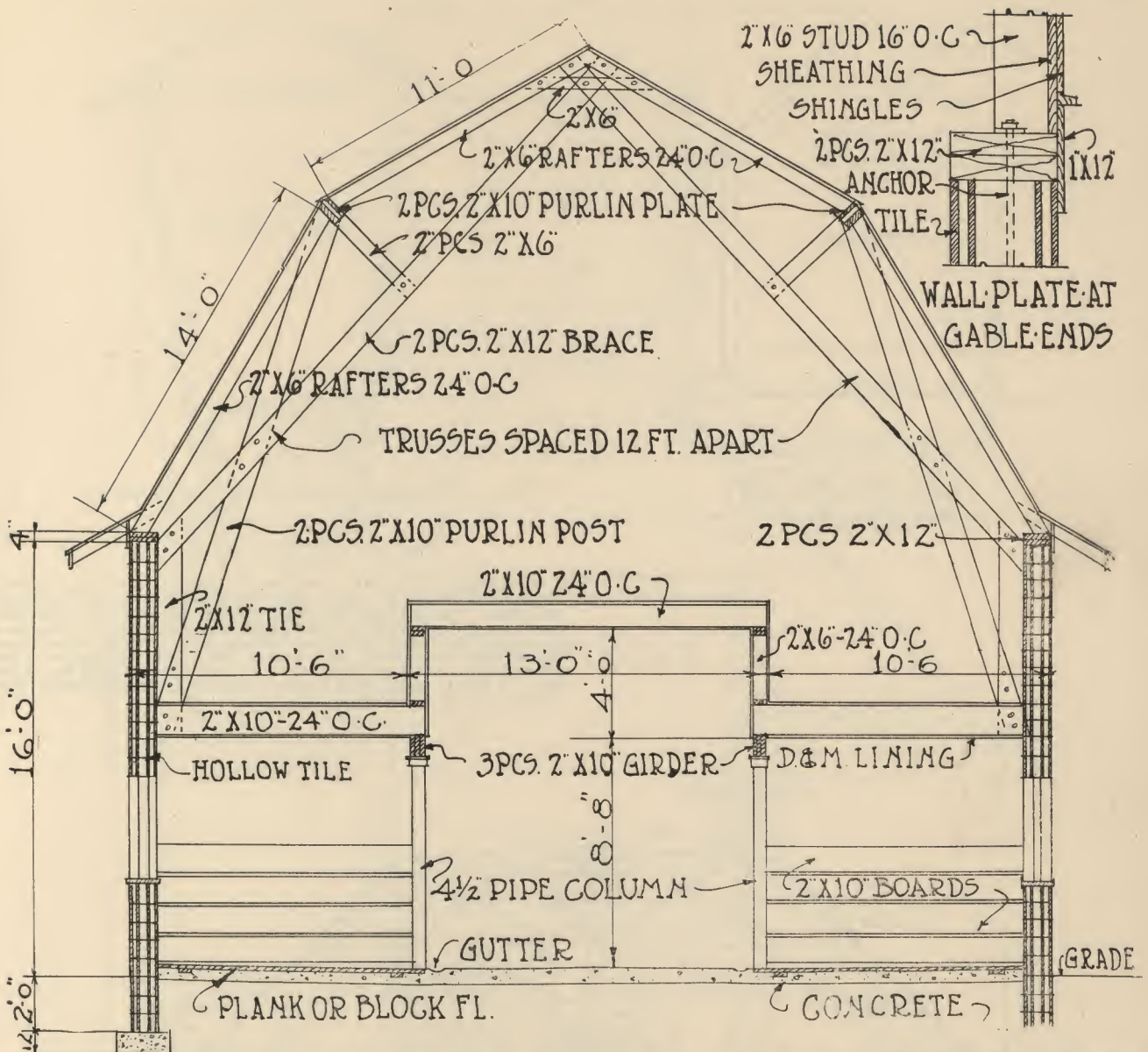
CONCRETE FOUNDATION FORMS

SCALE $\frac{3}{8}" = 1'-0"$

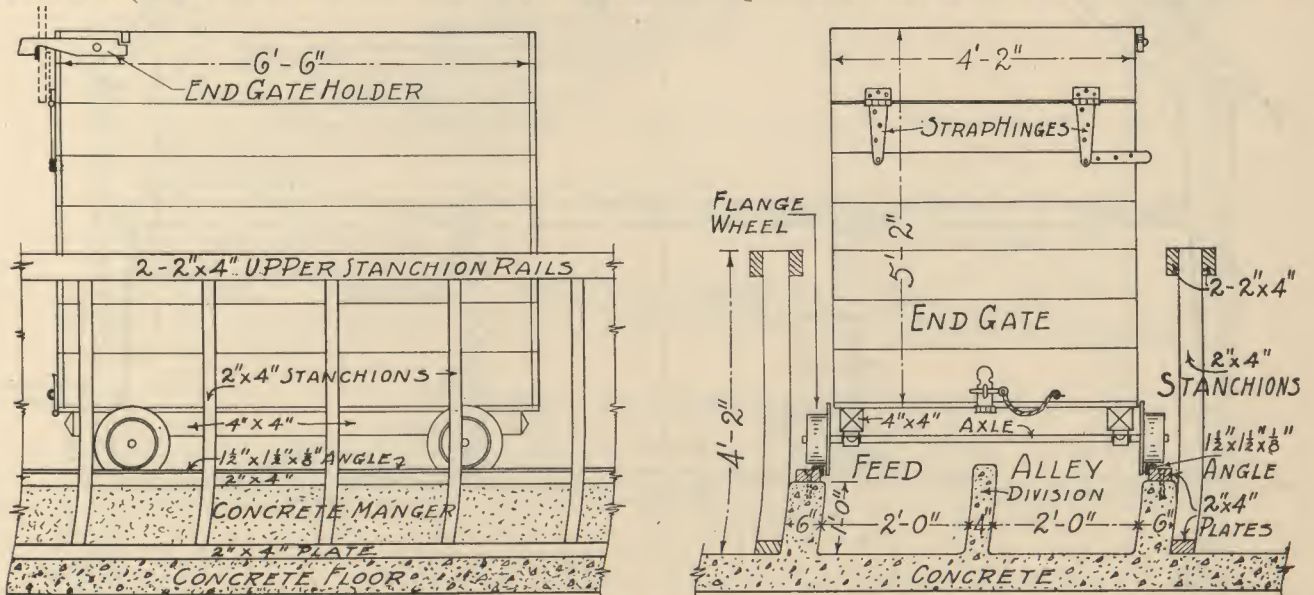


CROSS SECTION

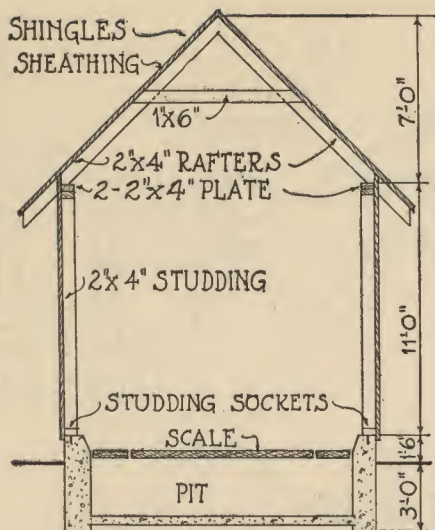
SCALE $\frac{1}{8}" = 1'-0"$



Section Thru Hollow Tile Horse and Cow Barn, Showing Framing for Self-Supporting Roof. The Tile Walls Extend Clear Up to the Eaves. The Purlin Braces Come Down to the Floor Joists and Are Tied to the Ends of the Truss Chord Above at the Plate Line by Means of Two Pieces of 2 by 12 for Each Truss. This Takes the Outward Thrust Away from the Top of the Tile Wall.

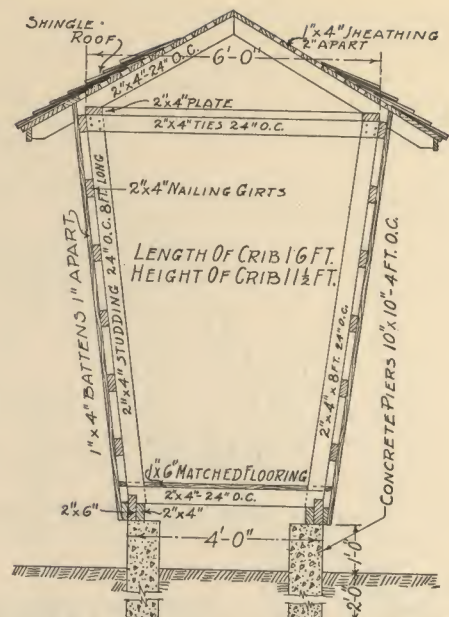


Working Drawings of Handy Cart for Feeding Silage. The Cart Runs on a Light Angle-Iron Track the Length of the Feed Alley. It Is Filled Directly from the Silo, and When the End Gate Is Opened the Silage Is Raked Out and Distributed with a Minimum of Time and Labor.



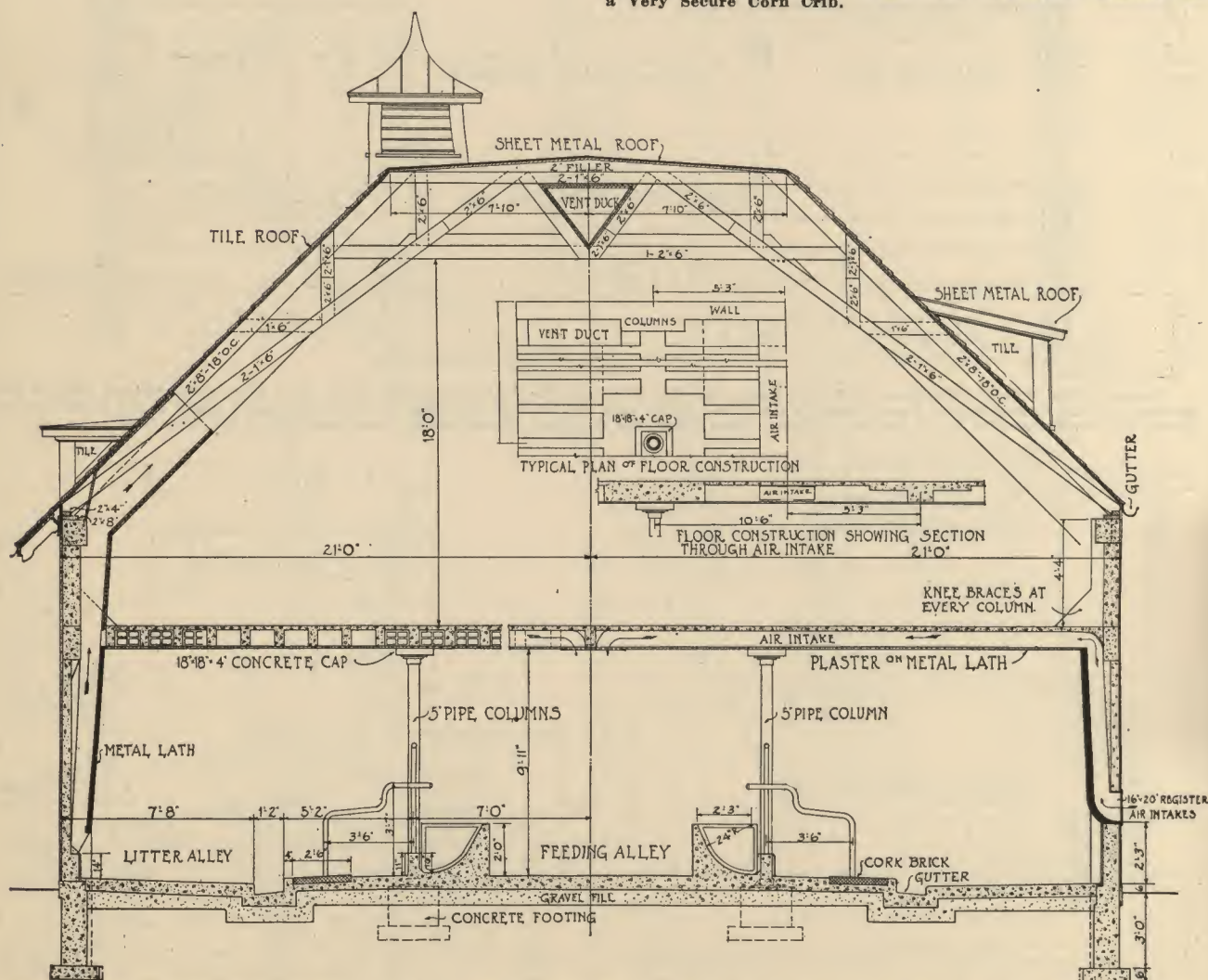
CROSS SECTION

Dimensioned Construction View of
Scale House.

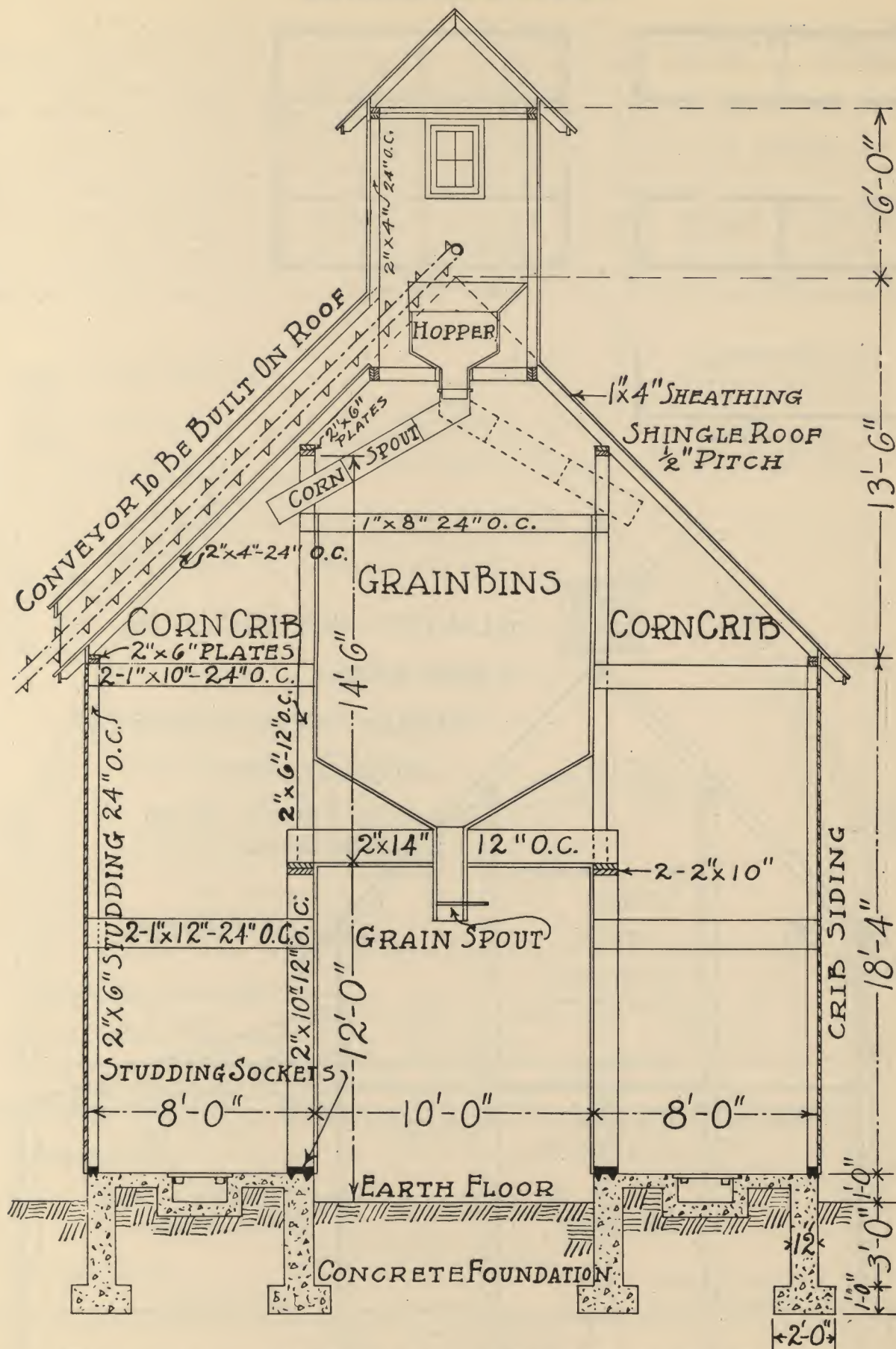


SECTION THRU CORN CRIB

Small Single Corn Crib of the Good Old-Fashioned Type Resting on Concrete Posts 12 Inches Above Ground to Keep Out the Rats and Mice. The Building Is 4 Feet Wide at the Base, Sloping Outward to a 6-Foot Width at the Plates. The Height Is 11 1/2 Feet and the Length 16 Feet; 1 by 4-Inch Battens Placed 1 Inch Apart Form the Sloping Side Walls and Assure Plenty of Ventilation. For Convenience in Filling, There Are Two Small Doors High Up in the Side. A Good, Tight, Well Framed Roof Is Provided, Making This a Very Secure Corn Crib.

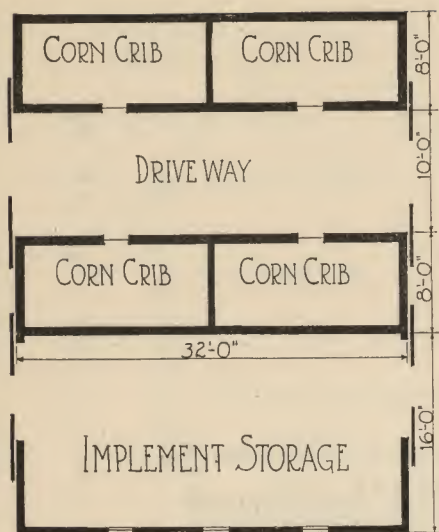


Cross-Section of Fireproof Dairy Stable of Reinforced Concrete, Showing Some of the Construction Features. The Air Intake Is Built Thru the Ceiling Over the Stable, Which Is of Concrete and Tile. The Truss Framing for the Roof Is Unusual.

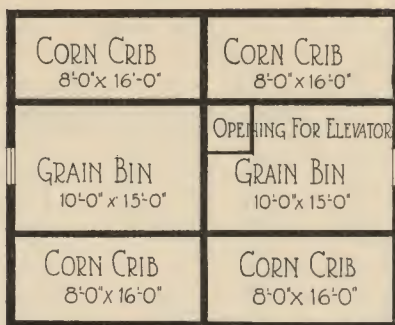


CROSS SECTION OF CORN CRIB

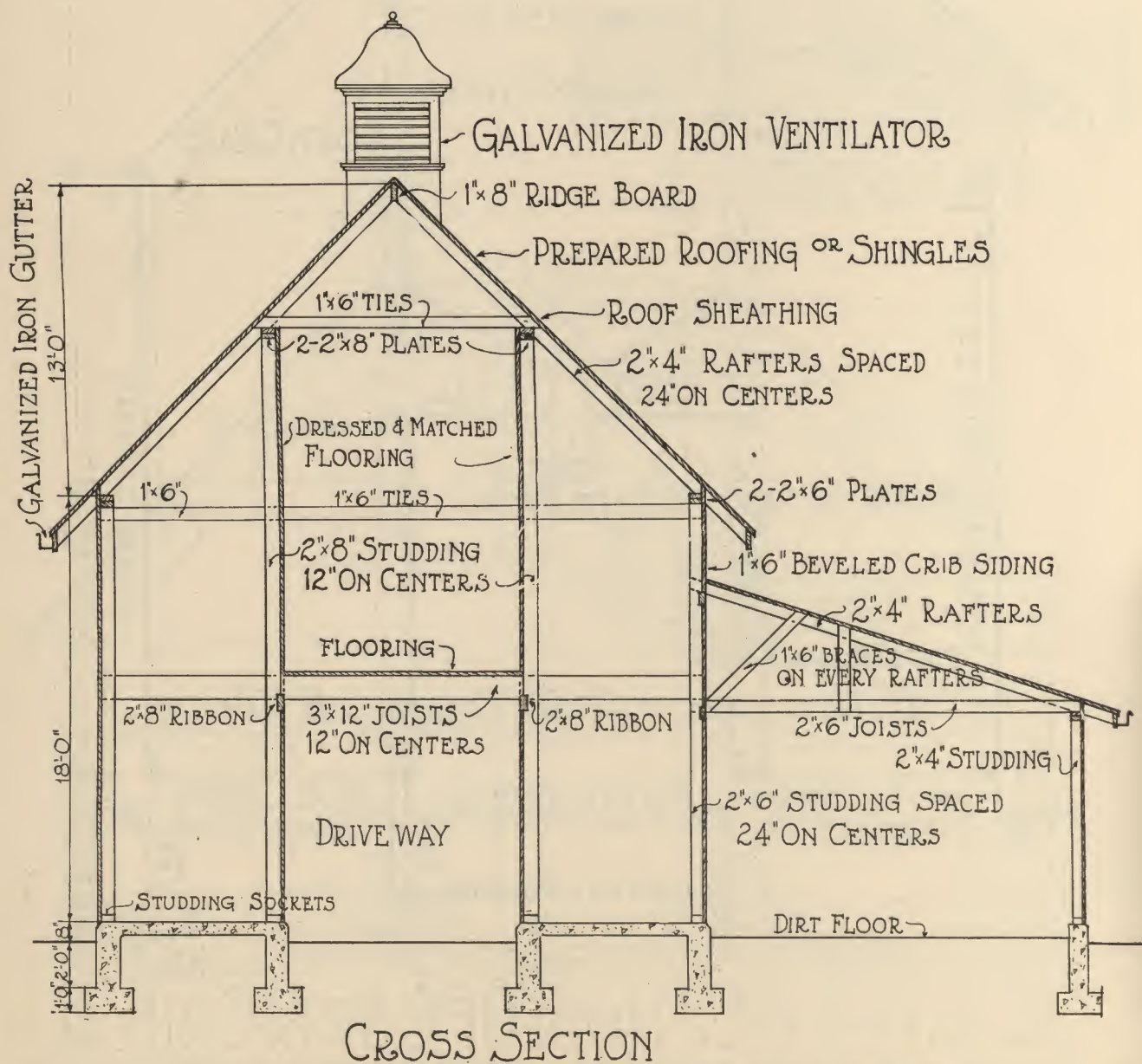
Details of Construction of High Corn Crib and Granary. Note How the Distributing Hopper Is Arranged in the Cupola.



Ground Floor Plan.



Upper Floor Plan.



CROSS SECTION

Cross-Section Thru Combined Corn Crib, Grain House and Implement Storage Shed.

Roof Truss for 36-Foot Barn

Question—Would plank frame construction be heavy enough for a barn 36 feet wide, or would it be advisable to use another form of truss? What size plank should be used in a barn 36 feet wide, using 18-foot studding, 2 by 6's? There will be 2 by 6 rafters, two 2 by 6's for plates, 4 by 6's for sills, 2 by 10's for joists, and two 2 by 12's for girders, with 4 by 6 supports placed 9 feet apart. The joists would be 16 feet long between wall and girder.

Would you advise tying with a 2 by 6 at a point just below the plate to the floor joists, say at an angle of 45 deg.? The braces on the rafters are to be 1 by 8's.

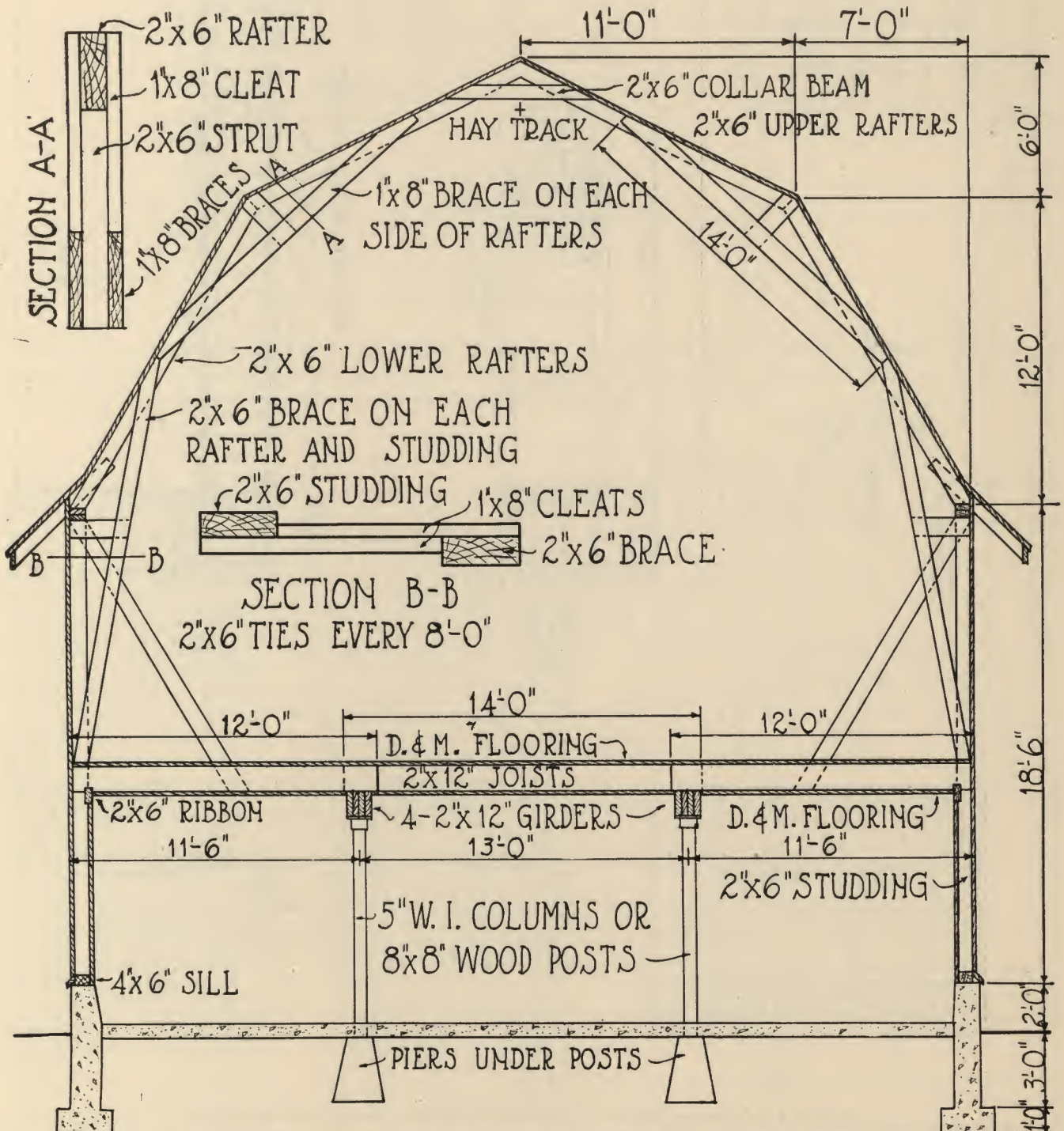
Answer—If you will cover the joints of the intersecting rafters with 1 by 8-inch cleats on each side, it will strengthen

this point very much (see detail at section A-A). The 1 by 8-inch braces on each side of the rafters are heavy enough for a barn of ordinary construction, if it is not exposed too much to high wind.

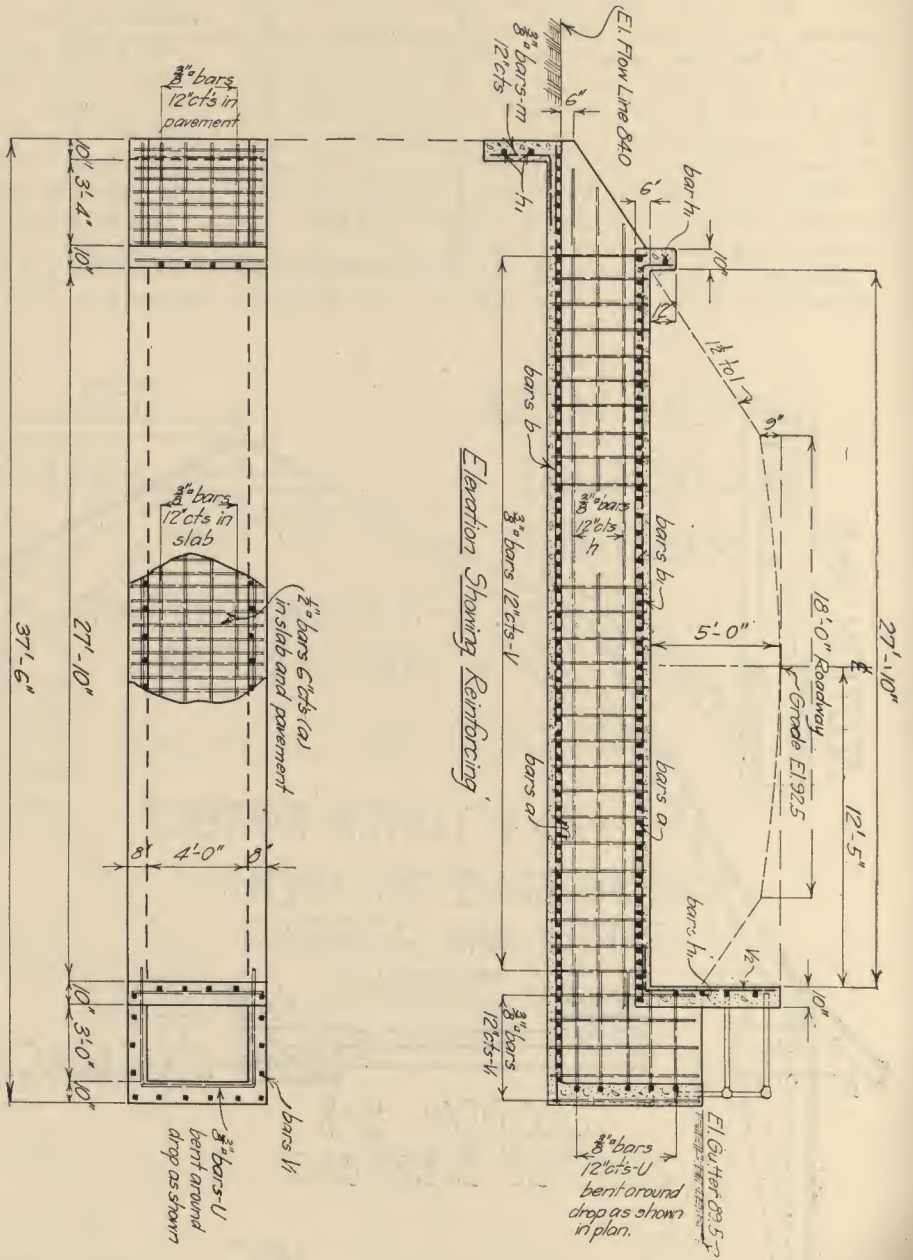
For a barn with 18-foot studding use 2 by 6-inch timbers instead of 1 by 8-inch for the lower brace.

If the barn is exposed to high winds, we would advise tying with a 2 by 6-inch at the point just below the floor joists, spaced 8 feet on centers.

In regard to the floor joists, 2 by 10-inch are not heavy enough for a span of 16 feet with the amount of hay storage that you have to carry. We would recommend using 2 by 12-inch joists and spacing the posts 11 feet 6 inches from the outside wall. This would make the span more evenly spaced.



Detail Showing Recommended Sizes for Various Members in Plank Frame Barn That Is 36 Feet Wide.



Elevation Showing Reinforcing

Plan

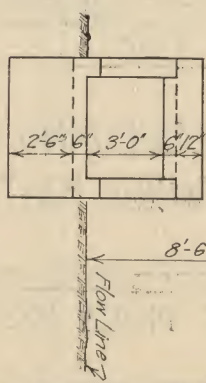
To be constructed in accordance with the State of Illinois State Highway Dept. Contract Form and General Specifications for Bridge Work, Edition of July, 1915.
All exposed edges to be beveled with 3/4" triangular mauling.
Class 'A' concrete to be used throughout Proportions 1-2 1/2-4.
All steel reinforcing bars must be mild or medium steel rolled from new billets.
No rerolled material or high carbon steel will be permitted.
All bars must be obtained in the full lengths indicated in bill of material.
BM Two spikes in oak tree at ditch, W side of road - EI. 91.25

Plans of
George Love Culvert
Rosedale Twp.
1916.
A. B. Carter
Highway Engineer

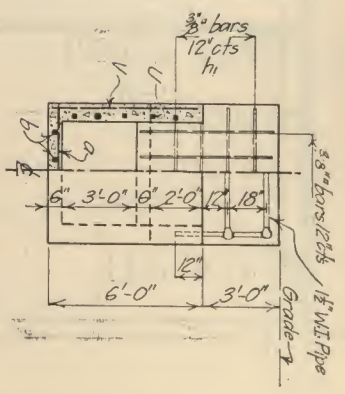
Bill of Material

Letter	No.	Size	Length
a	134	1/2"	5'-0"
b	8	3/8"	19'-6"
b ₁	8	"	15'-9"
h	12	"	17'-0"
h ₁	7	"	5'-0"
U	5	"	14'-0"
m	4	"	4'-0"
v	58	"	3'-9"
v ₁	14	"	5'-6"
v ₂	4	"	6'-6"
Wrought Iron Pipe	1 1/2"		32'-0"
Steel	10.13*		
Concrete	14.5		cords

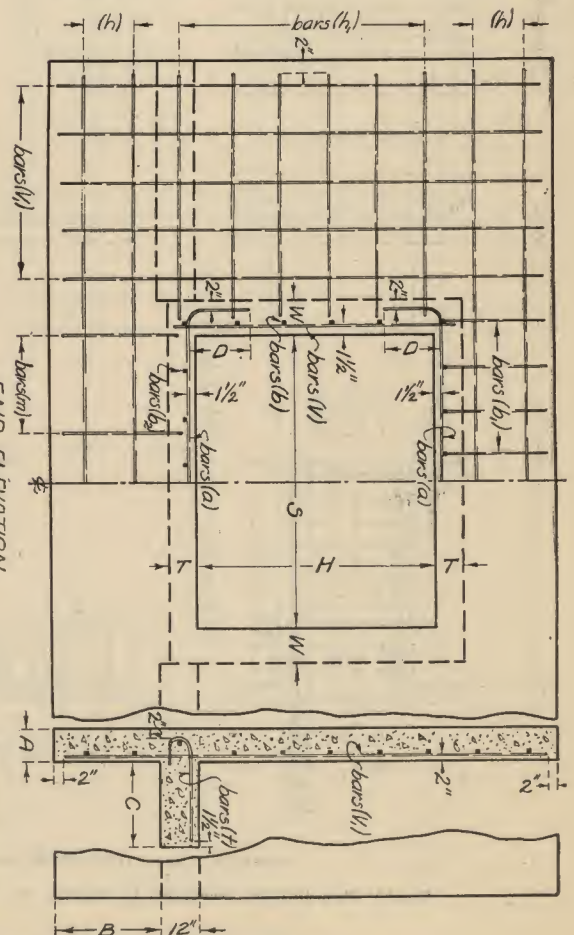
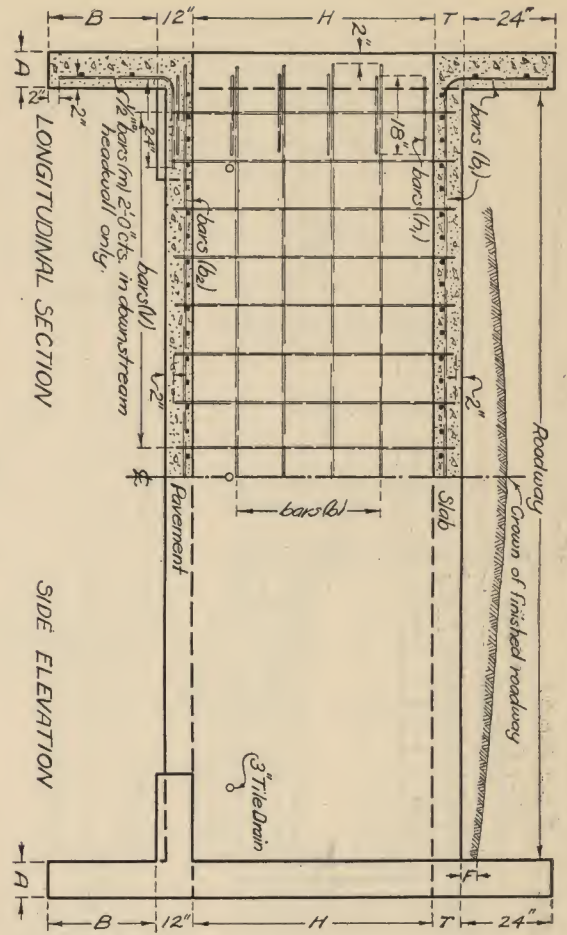
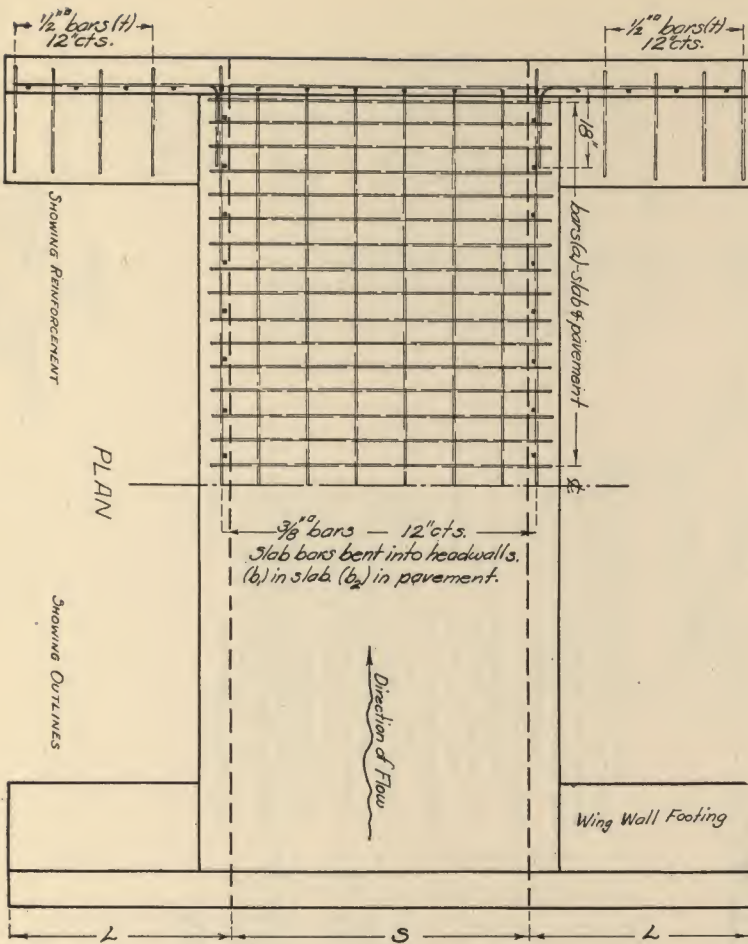
End View Down Stream



End View of Drop



DESIGN AND CONSTRUCTION OF SPECIAL HIGHWAY DRAINAGE STRUCTURES.
Detail Illustrating a Type of Box Culvert Used to Drop Elevation of Water Flow Line Without Scouring of Soil.



Dimensional	Data				Reinforcing									
	D	H	T	W	A	B	C	D	L	Bars				
2	"	H	T	W	A <td>B</td> <td>C<td>D<td>L</td><td>(a)</td><td>(b)</td><td>(b)</td><td>(V)</td><td>(V)</td></td></td>	B	C <td>D<td>L</td><td>(a)</td><td>(b)</td><td>(b)</td><td>(V)</td><td>(V)</td></td>	D <td>L</td> <td>(a)</td> <td>(b)</td> <td>(b)</td> <td>(V)</td> <td>(V)</td>	L	(a)	(b)	(b)	(V)	(V)
3	"	2'	6"	8"	8"	Note	Note	"	"	3/8	3/8	3/8	1/2	1/2
3	"	Up to 3'	8"	8"	8"	"	"	"	"	3/8	5"	5"	10"	3/8
4	"	"	4'	6"	8"	8"	"	"	"	1/2	6"	6"	10"	3/8
5	"	"	5'	7"	8"	8"	24"	"	"	1/2	7"	7"	10"	3/8
5	"	"	5'	7"	8"	8"	24"	"	"	1/2	7"	7"	10"	3/8
6	"	6'	7"	8"	8"	24"	"	"	"	1/2	5"	5"	10"	3/8
7	"	"	7"	8"	8"	24"	"	"	"	5/8	4 1/2"	4 1/2"	10"	3/8
8	"	7'	8"	8"	8"	24"	"	"	"	5/8	4 1/2"	4 1/2"	10"	3/8
9	"	"	9"	9"	9"	12"	24"	"	"	5/8	5"	5"	10"	3/8
9	"	"	9"	9"	9"	12"	24"	"	"	5/8	5"	5"	10"	3/8
10	"	"	9"	9"	9"	12"	24"	"	"	5/8	5"	5"	10"	3/8
11	"	"	9"	9"	9"	12"	24"	"	"	5/8	5"	5"	10"	3/8
12	"	"	9"	9"	9"	12"	24"	"	"	5/8	5"	5"	10"	3/8

NOTE—Culverts having spans of 4'-0" or less may be constructed with out longitudinal feedings if (a) bars are placed $1\frac{1}{2}$ " from outer face of side walls and bent 18" into headwalls, $1\frac{1}{2}$ " from outer face, (b) bars are also moved to outer face of side walls. Distance "B" should be 12 on up-stream, and 2'-6" on down-stream end, measured from bottom of pavement with footing omitted. In culverts of span 4'-0" or under, 2-(b) bars are placed 4" from top of headwall, 2" from either face and (b) bars are bent into center of well. All steel should be mild or medium first-grade stock. Lengths not indicated should be figured with the end clearances shown in the diagram and should be obtained in the full lengths indicated or calculated.

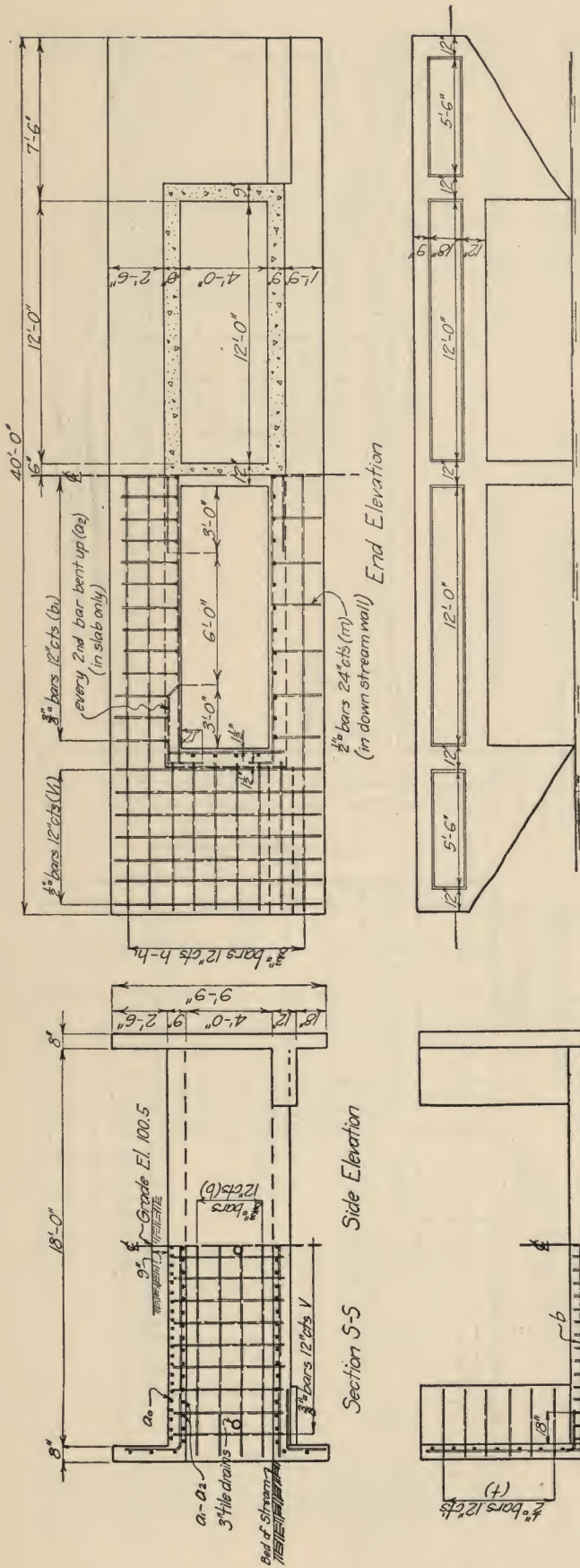
Bent, all exposed edges with $\frac{3}{4}$ " triangular mounding.

Length L as calculated from the equation given below implies a slope of $1\frac{1}{2}$ to 1 for earth fill falling around ends of headwalls.

Dimensions shown are not intended to apply to culverts carrying heavy fills. Culverts of span 4'-0" or under will carry fill of 4'-0"; all others are designed to carry fill of 1'-0" only.

Concrete should be proportioned 1-2 $\frac{1}{2}$ -4 thruout.

DESIGN AND CONSTRUCTION OF SPECIAL HIGHWAY DRAINAGE STRUCTURES.
Plan for Reinforced Concrete Box Culverts of Span 12 Feet or Less and Height 9 Feet or Less.



General Elevation

Bill of Material

Letter	No.	Size	Length
V	36	3/4"	5'-0"
h	28	3/4"	9'-0"
h	12	3/4"	21'-0"
h	24	"	9'-0"
a	47	3/4"	28'-0"
a	15	"	29'-6"
a	86	"	7'-0"
b	25	3/4"	23'-0"
b	33	"	19'-0"
t	24	3/4"	3'-9"
m	13	"	4'-0"
Steel	5735*		
Concrete	50.3 cu yds		

To be constructed in accordance with the State of Illinois State Highway Dept. Contract Form and General Specifications for Bridge Work Edition of July, 1915.

All exposed edges to be beveled with 3/4" triangular molding.

Where grooved panels are shown the same to be made with 1 1/2" triangular molding.

Place 3" tie drains in side walls about 18" above pavement, 8 ft cts.

Class A concrete to be used throughout.

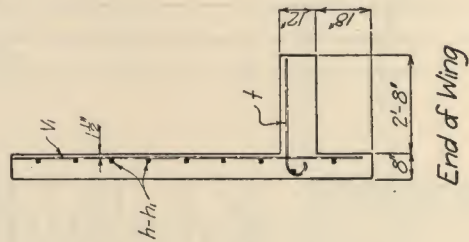
Proportions 1 - 2 1/2 - 4.

All steel reinforcing bars must be mild or medium steel rolled from new billets.

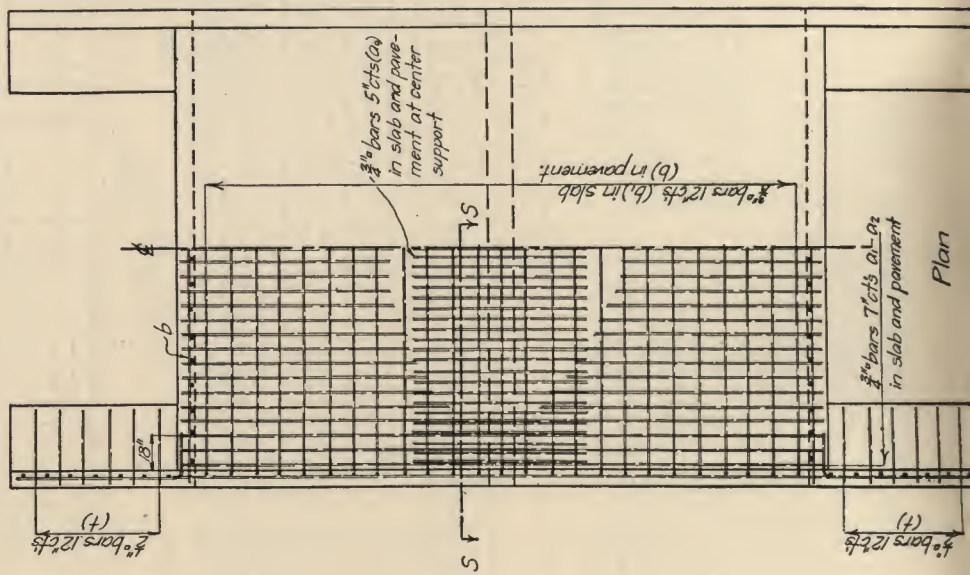
No rerolled material or high carbon steel will be permitted.

All bars must be obtained in the full lengths indicated in bill of material.

BM - two spikes in corner post, W. side of road, S. side of road.



End of Wing

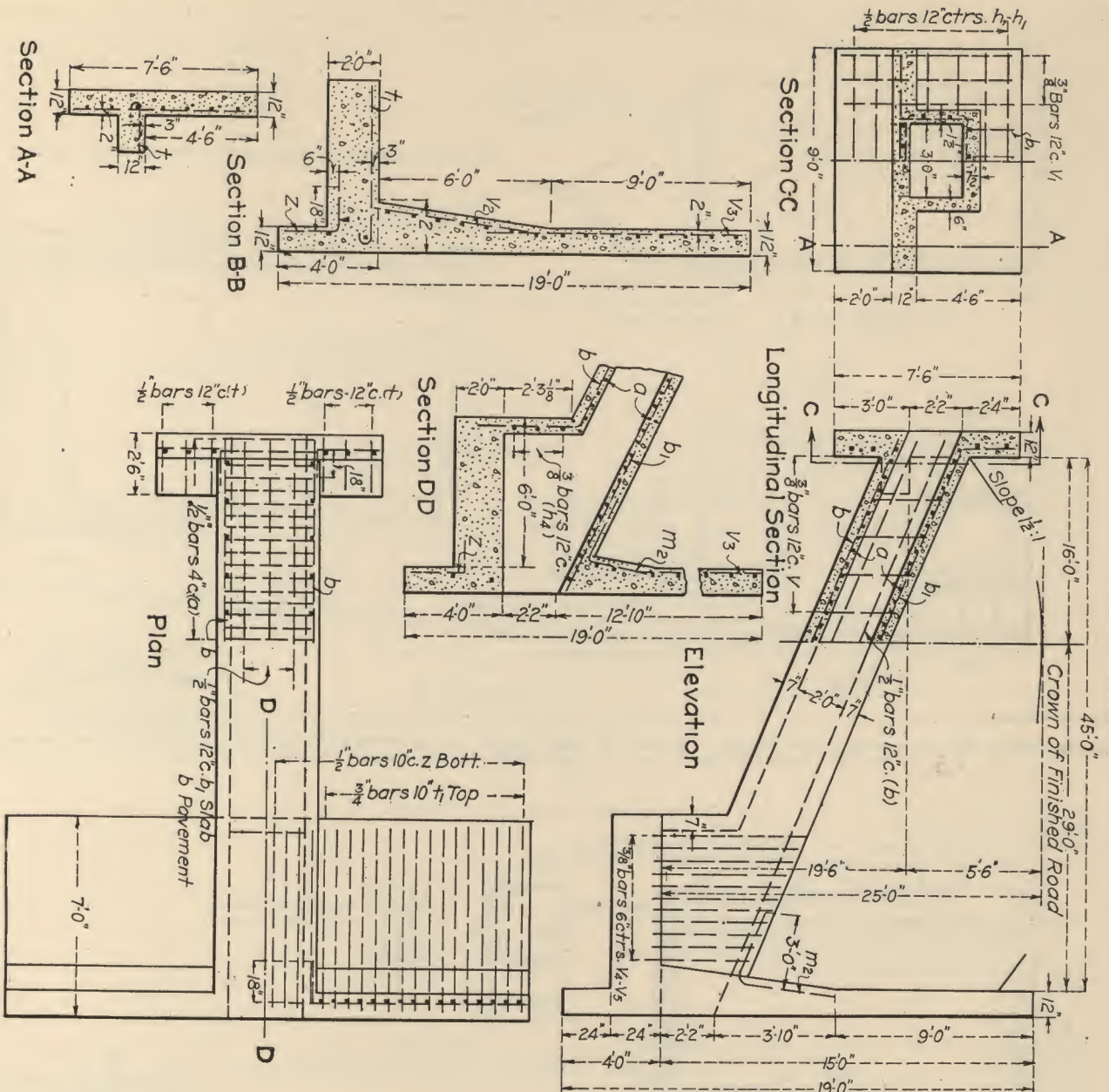


Plan

DESIGN AND CONSTRUCTION OF SPECIAL HIGHWAY DRAINAGE STRUCTURES.

Double Box Culvert Designed to Reduce the Cost of a Long Span Necessary Because of Limited Vertical Clearance.

Plans of
Brandt Bridge
Roscoe, Ind.
1916

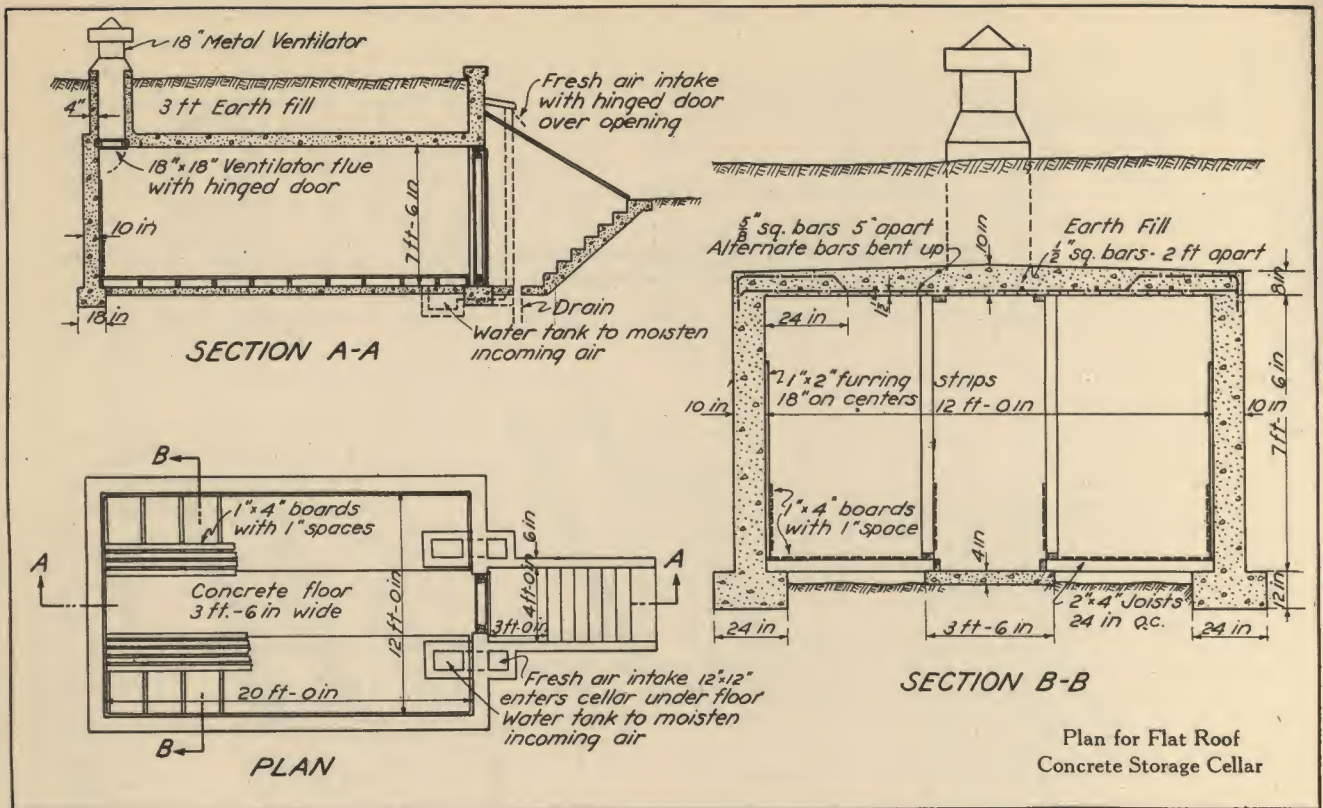


Bill of Material :-

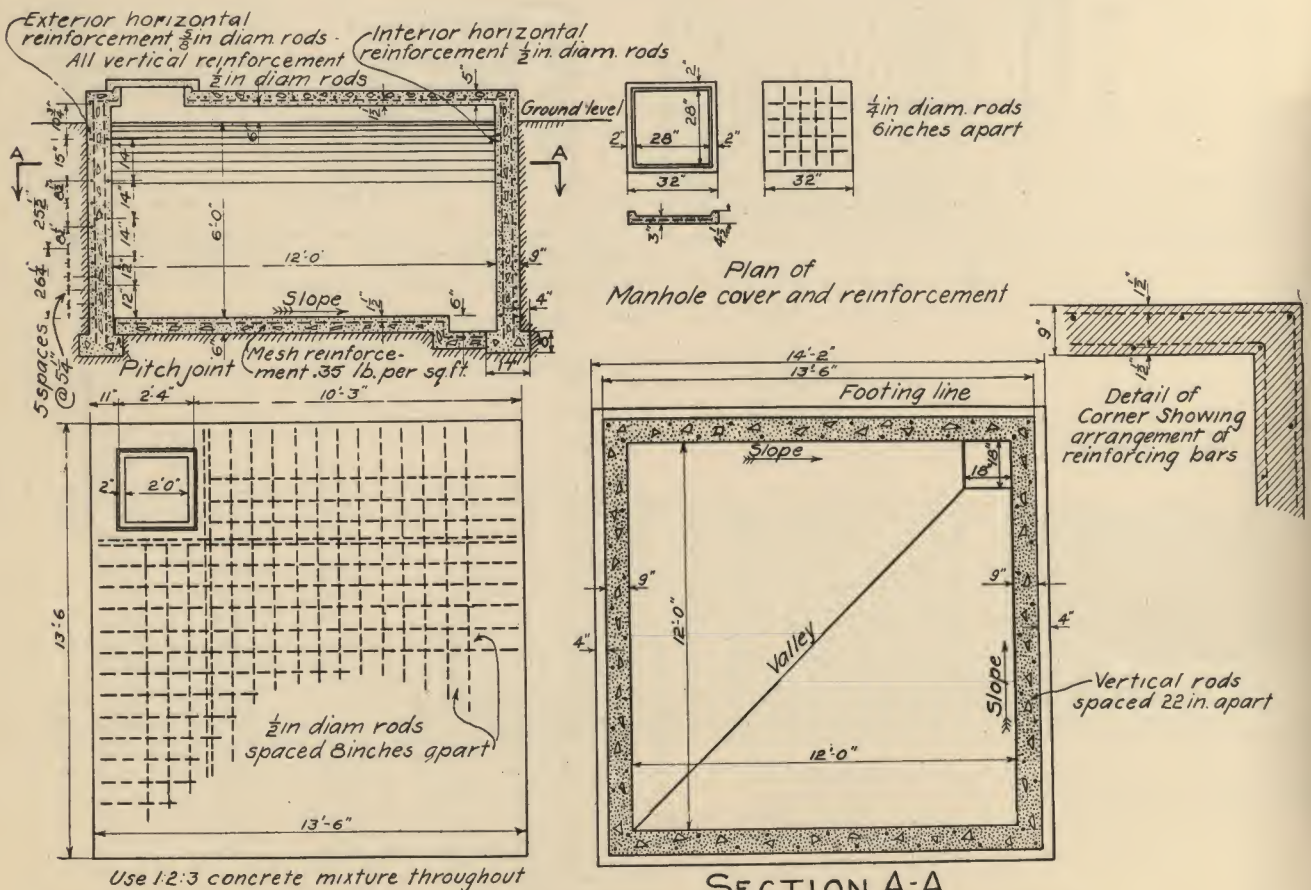
Bars	No.	Size	Length
a	260	1/2"	5'-0"
b	21	"	18'-0"
b ₁	9	"	18'-6"
h	4	"	4'-0"
h ₁	5	"	6'-6"
h ₂	4	"	21'-0"
h ₃	34	"	22'-0"
v	76	3/8"	3'-0"
v ₁	6	"	7'-0"
v ₂	46	3/4"	9'-0"
v ₃	51	5/8"	11'-0"
h ₄	3	3/8"	3'-6"
m ₂	5	3/4"	6'-0"
t	6	1/2"	3'-0"
f ₁	46	3/4"	7'-6"
z	51	1/2"	4'-0"
v ₄	10	3/8"	6'-0"
v ₅	16	"	4'-0"
Steel - Lbs. 4960			
Concrete cu Yds. 670			

DESIGN AND CONSTRUCTION OF SPECIAL HIGHWAY DRAINAGE STRUCTURES.

Reinforced Concrete Culvert to Bring Water Down to Lower Level. Conditions Requiring This Type of Culvert Are Common in McDonough County, Illinois, Where This Design Was Developed in State Aid Highway Drainage Work.



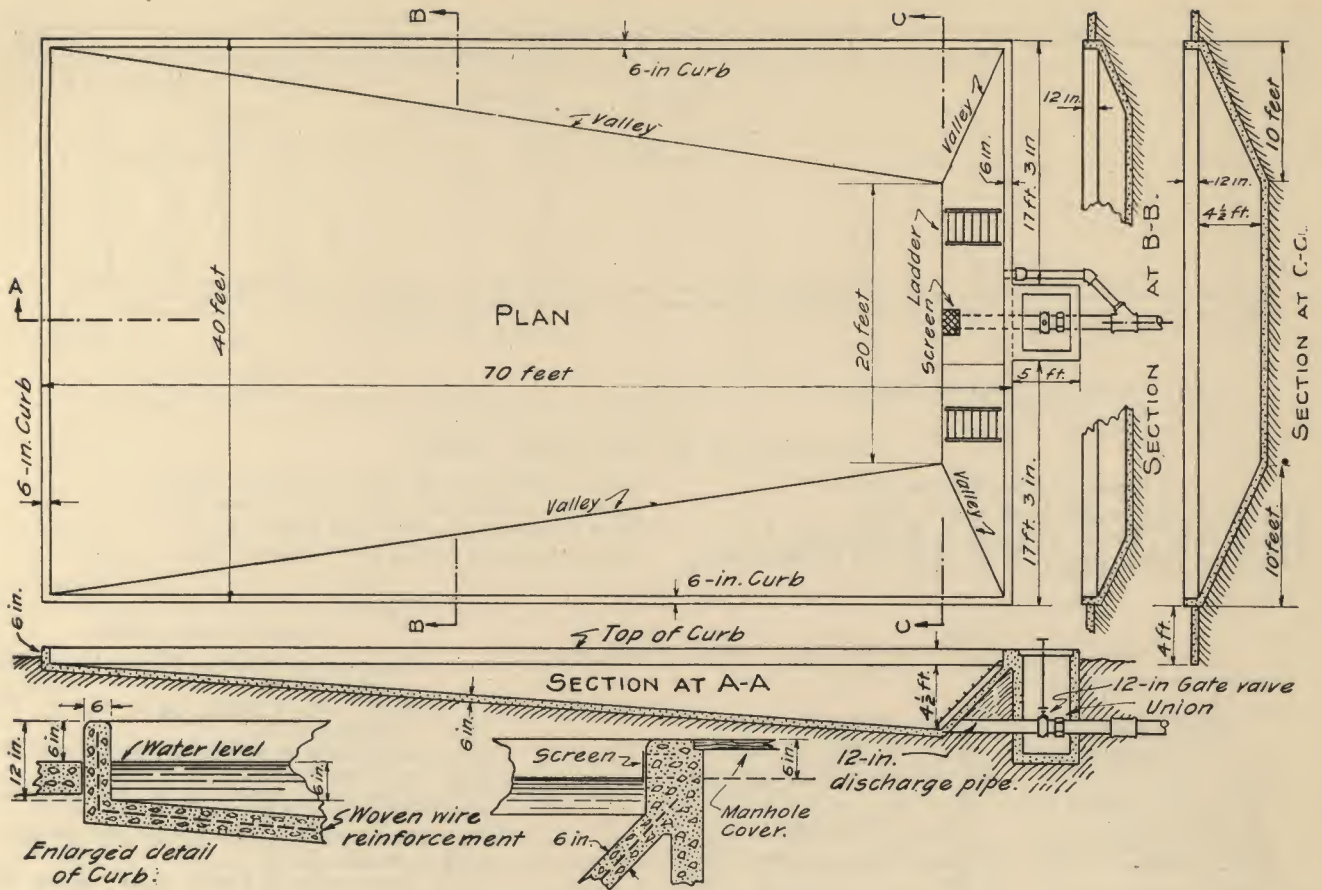
Storage Cellar with a Capacity of 800 Bushels. Greater or Less Capacity Can Be Secured by Adding to or Taking from the Length of the Plan, Each Additional Foot of Length Increasing the Storage Capacity 40 Bushels.



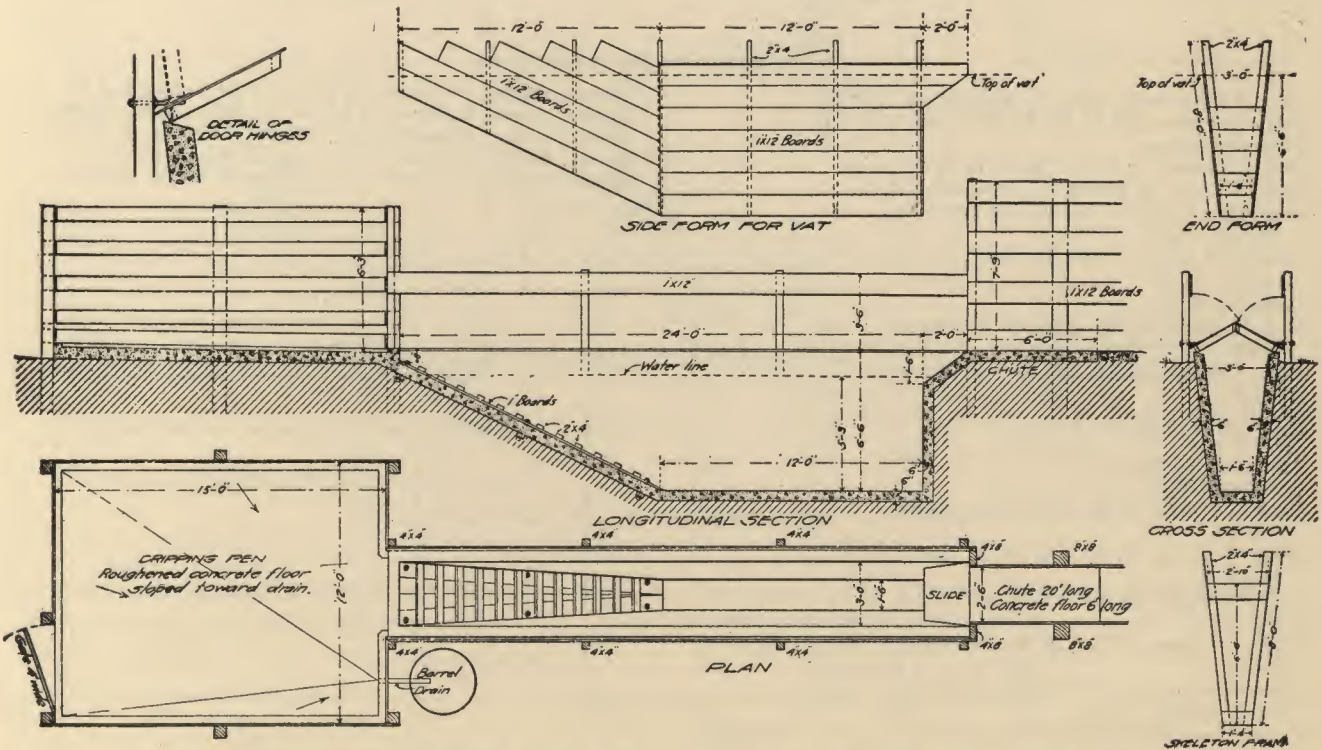
Use 1:2:3 concrete mixture throughout

Laps for horizontal reinforcement to be 50 diameters and should not occur at corners.

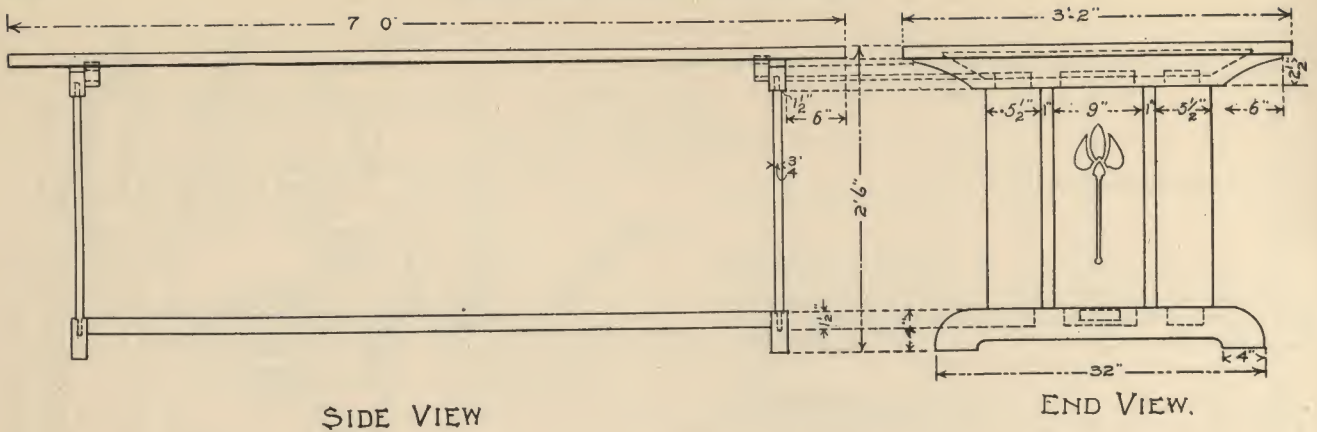
Construction Details of a Reinforced Concrete Tank Designed to Hold 6,000 Gallons of Oil.



Details of Concrete Swimming Pool.



Plans for a Concrete Dipping Vat for Cattle, as Recommended by the U. S. Department of Agriculture.

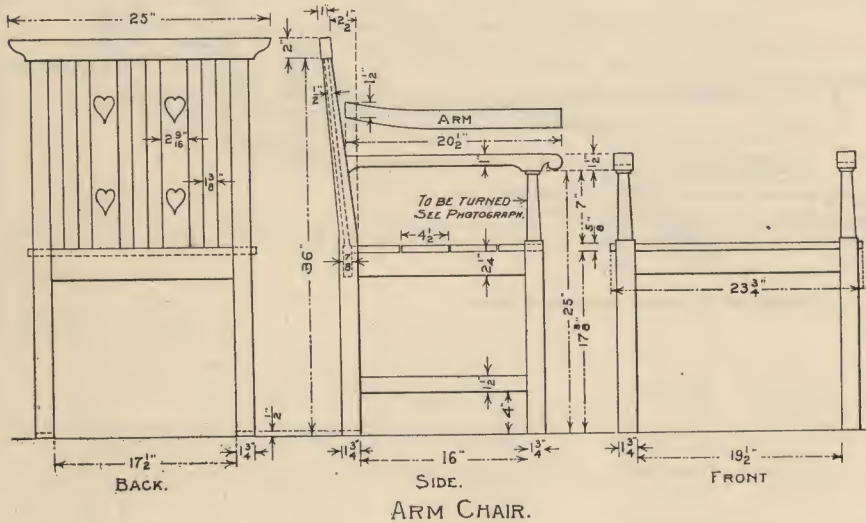


ARCHITECT'S OR BUILDER'S TABLE.

STOCK BILL FOR OFFICE TABLE

Top, 1 piece, $1\frac{1}{8}$ by $38\frac{1}{2}$ by 85 inches, S-2-S.
 Top end rails, 2 pieces, $1\frac{1}{2}$ by $3\frac{3}{4}$ by 38 inches, S-2-S.
 Bottom end rails, 2 pieces, $1\frac{1}{2}$ by $4\frac{1}{4}$ by $32\frac{1}{2}$ inches, S-2-S.

Cleats, 2 pieces, $1\frac{1}{2}$ by $2\frac{1}{2}$ by 32 inches, S-2-S.
 Stretcher, 1 piece, $1\frac{1}{2}$ by $7\frac{1}{4}$ by 70 inches, S-2-S.
 Slats, 2 pieces, $\frac{3}{4}$ by $9\frac{1}{4}$ by 26 inches, S-2-S.
 Slats, 4 pieces, $\frac{3}{4}$ by $5\frac{3}{4}$ by 26 inches, S-2-S.



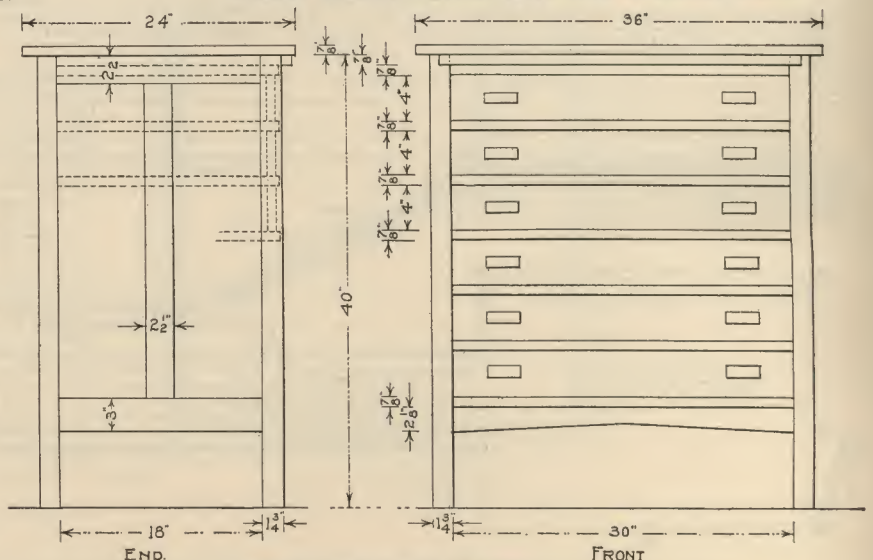
STOCK BILL FOR CHAIR

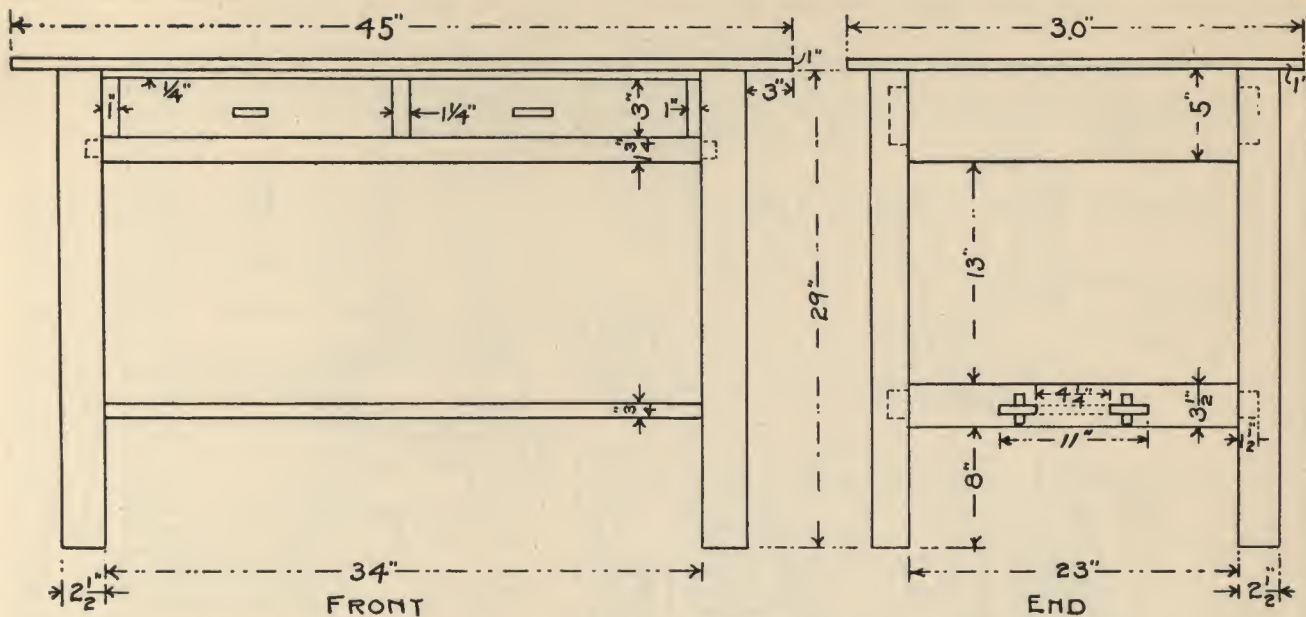
Front posts, 2 pieces, $1\frac{3}{4}$ by $1\frac{3}{4}$ by 26 inches, S-4-S.
 Back posts, 1 piece, $1\frac{3}{4}$ by $5\frac{1}{2}$ by 37 inches, S-2-S.
 Seat rails, 2 pieces, $\frac{7}{8}$ by $2\frac{1}{2}$ by 18 inches, S-2-S.
 Seat rail, 1 piece, $\frac{7}{8}$ by $2\frac{1}{2}$ by $21\frac{1}{2}$ inches, S-2-S.
 Seat rail, 1 piece, $\frac{7}{8}$ by $3\frac{3}{8}$ by $19\frac{1}{2}$ inches, S-2-S.
 Lower rails, 2 pieces, $\frac{5}{8}$ by $1\frac{3}{4}$ by 18 inches, S-2-S.
 Seat, 4 pieces, $\frac{5}{8}$ by $4\frac{3}{4}$ by 24 inches, S-2-S.
 Arms, 2 pieces, $1\frac{1}{2}$ by 3 by 21 inches, S-2-S.
 Back, 1 piece, 1 by $2\frac{1}{4}$ by $25\frac{1}{2}$ inches, S-2-S.
 Back slats, 2 pieces, $\frac{1}{2}$ by $2\frac{3}{4}$ by 19 inches, S-2-S.
 Back slats, 3 pieces, $\frac{1}{2}$ by $1\frac{5}{8}$ by 19 inches, S-2-S.

STOCK BILL FOR DRAFTING TABLE

Top, 1 piece, $\frac{7}{8}$ by $24\frac{1}{2}$ by $36\frac{1}{2}$ inches, S-2-S.
 Posts, 4 pieces, $1\frac{3}{4}$ by $1\frac{3}{4}$ by $40\frac{1}{2}$ inches, S-4-S.
 Side paneling—
 Rails, 2 pieces, $\frac{3}{4}$ by $3\frac{3}{4}$ by 20 inches, S-2-S.
 Rails, 2 pieces, $\frac{3}{4}$ by $2\frac{3}{4}$ by 20 inches, S-2-S.
 Munting, 2 pieces, $\frac{3}{4}$ by $3\frac{3}{4}$ by $26\frac{1}{2}$ inches, S-2-S.
 Panels, 4 pieces, $\frac{5}{16}$ by $8\frac{1}{2}$ by $25\frac{1}{2}$ inches, S-2-S.
 Back paneling—
 Rail, 1 piece, $\frac{3}{4}$ by $3\frac{3}{4}$ by 32 inches, S-2-S.
 Rail, 1 piece, $\frac{3}{4}$ by $2\frac{3}{4}$ by 32 inches, S-2-S.
 Munting, 2 pieces, $\frac{3}{4}$ by $2\frac{3}{4}$ by $26\frac{1}{2}$ inches, S-2-S.
 Panels, 3 pieces, $\frac{5}{16}$ by 9 by $25\frac{1}{2}$ inches, S-2-S.
 Facing, 1 piece, $\frac{3}{4}$ by $2\frac{3}{8}$ by $32\frac{1}{2}$ inches, S-2-S.
 Slide, 2 pieces, $\frac{3}{4}$ by $1\frac{3}{4}$ by 22 inches, S-2-S.
 Slide, 2 pieces, $\frac{3}{4}$ by $1\frac{3}{4}$ by 33 inches, S-2-S.
 Slide, 1 piece, $\frac{1}{2}$ by 16 by 28 inches, S-2-S.
 Drawer supports, 14 pieces, $\frac{7}{8}$ by $2\frac{1}{2}$ by 20 inches, S-2-S.
 Drawer supports, 14 pieces, $\frac{7}{8}$ by $2\frac{1}{2}$ by $32\frac{1}{2}$ inches, S-2-S.

Drawer guides, 14 pieces, $\frac{3}{4}$ by $\frac{3}{4}$ by 20 inches, S-2-S.
 Drawer fronts, 6 pieces, $\frac{3}{4}$ by $4\frac{1}{4}$ by $30\frac{1}{2}$ inches, S-2-S.
 Drawer ends, 12 pieces, $\frac{1}{2}$ by $4\frac{1}{4}$ by 20 inches, S-2-S.
 Drawer backs, 6 pieces, $\frac{3}{8}$ by 4 by 30 inches, S-2-S.
 Drawer bottoms, 6 pieces, $\frac{3}{8}$ by 20 by 30 inches, S-2-S.





LIBRARY OR STUDY TABLE.

STOCK BILL FOR LIBRARY TABLE

Top, 1 piece, 1 by 30 1/2 by 45 1/2 inches, S-2-S.
 Legs, 4 pieces 2 1/2 by 2 1/2 by 29 1/2 inches, S-4-S.
 Back rail, 1 piece, 3/4 by 5 1/4 by 37 inches, S-2-S.
 End rails, 2 pieces, 3/4 by 5 1/4 by 26 inches, S-2-S.
 Front rail, 1 piece, 3/4 by 2 by 37 inches, S-2-S.
 Shelf, 1 piece, 3/4 by 11 1/4 by 40 inches, S-2-S.
 Drawer facings, 2 pieces, 3/4 by 3 1/4 by 16 inches, S-2-S.

Drawer sides, 4 pieces, 3/8 by 3 1/4 by 26 inches, S-2-S.

Drawer backs, 4 pieces, 3/8 by 3 by 16 inches, S-2-S.

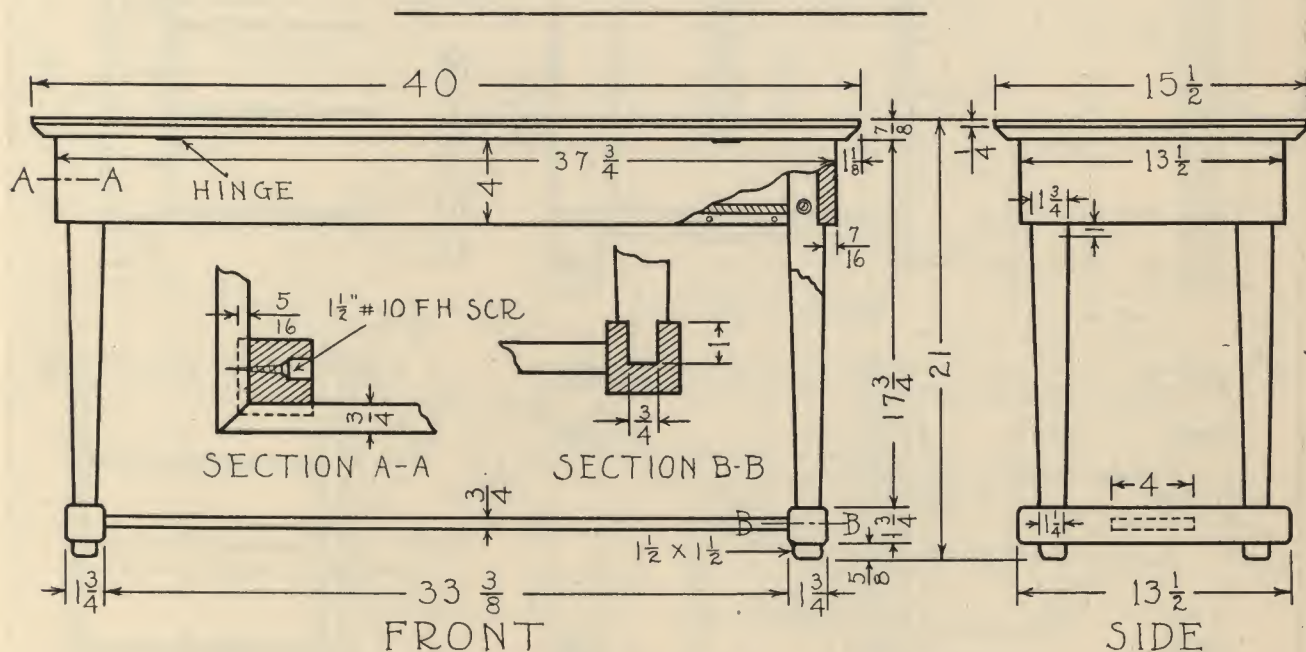
Drawer bottoms, 2 pieces, 3/8 by 26 by 16 inches, S-2-S.

Drawer slides, 3 pieces, 3/4 by 2 3/4 by 26 inches, S-2-S.

Drawer guides, 3 pieces, 3/4 by 1 1/2 by 26 inches, S-2-S.

Tie, over drawers, 1 piece, 1/2 by 2 3/4 by 36 inches, S-2-S.

The remaining pieces, keys, and short facings about the drawers may be got from scrap stock.



Construction Details of a Strong and Serviceable Piano Bench.

STOCK BILL FOR PIANO BENCH, GIVING FINISHED SIZES

Cover, 1 piece, 7/8 by 15 1/2 by 40.
 Posts, 4 pieces, 1 3/4 by 1 3/4 by 18 3/4 (one 1-inch tenon).
 Frame, 2 pieces, 3/4 by 4 by 37 3/4.
 2 pieces, 3/4 by 4 by 13 1/2.
 Lower rail, 2 pieces, 1 3/4 by 1 3/4 by 13 1/2.

Stretcher, 1 piece, 3/4 by 4 by 35 1/8 (two 7/8-inch tenons).

Blocks, 4 pieces, 5/8 by 1 1/2 by 1 1/2.

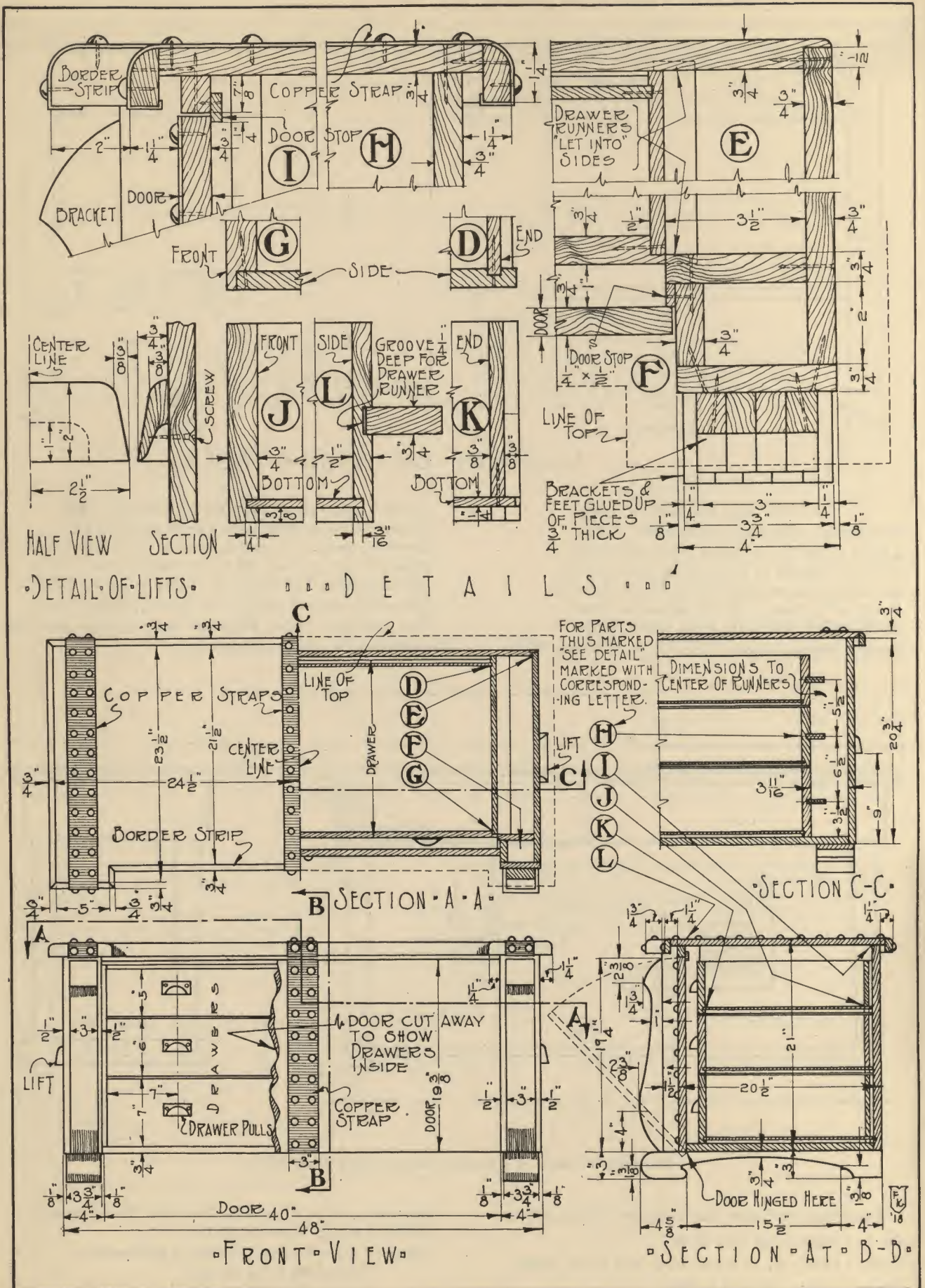
Bottom, 1 piece, 5/16 by 12 by 36 1/4 (wallboard).

2 pieces, 3/8 by 3/8 by 33 3/4.

2 pieces, 3/8 by 3/8 by 9 1/2.

Hardware, 1 pair 3/4 by 2 1/2 nickel plated butts.

16 1 1/2-inch No. 10 F. H. screws.



INDEX TO ARCHITECTURAL DETAILS

For Every Type of Building

A Collection of Authoritative Plates for Contractors, Builders, Lumber Dealers, Millmen, Draftsmen, and Architects

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